#200Fish - The Book

Compiled and edited by Biff Vernon
Art inspired by each species of fish found in the North Sea,
first exhibited at the North Sea Observatory, Chapel Point, Lincolnshire, August / September 2018.

Lincolnshire Time and Tide Bell - A Continuing Arts Programme facing Lincolnshire's Coast
#200Fish is a community art project, raising awareness of the biodiversity of the North Sea and its vulnerability to over-exploitation and global warming.

First published in August 2018 by Lincolnshire Time and Tide Bell Community Interest Company
Tithe Farm, Church End, North Somercotes, Louth, Lincolnshire. LN11 7PZ

Printed by Printondemand-worldwide.com 9 Culley Court, Orton Southgate, Peterborough. PE2 6XD

ISBN 978-1-9164465-0-2

Visit Lincs Coast
Lincolnshire Coastal Destination Business Improvement District

LOTTERY FUNDED
Supported using public funding by ARTS COUNCIL ENGLAND

Cover illustrations, front: Maxim Griffin 'Outer North Sea', and back: Edith Green and Ella Edgar both aged 11 '#200Fish'

#About

We are a Community Arts Group, bringing Marcus Vergette's sculpture to the Lincolnshire Coast, one part of a permanent installation of Time and Tide Bells around Britain's coast, rung by the sea at high tide. We are using the arts to stimulate thought about our coastal environment and the issues of global warming and sea level rise. We aim to spark conversations about the coastline's past, present and future with a programme of art exhibitions and events.

There are about 200 species of fish native to the North Sea. This project records their existence through works of art. Mindful of the threats to the marine environment, global warming, ocean acidification, pollution, over-fishing and so on, we have invited a large number of artists each to pick one of the fish species and produce a painting, sculpture or other art-work therefrom. Artists have also been invited to write something about their fish. This is probably the first time that such a large scale community arts project dedicated to fish diversity has been attempted anywhere in the world.

The impetus for founding our organisation came from Marcus Vergette, sculptor, creator of Time and Tide Bell and originator of the national project to install a series of about a dozen Bells as public sculptures managed by local community groups around Britain's coastline. While the various Time and Tide Bell communities are separate and independent entities they collaborate to their mutual benefit, giving a national impact to the individual projects.

Lincolnshire Time and Tide Bell Community Interest Company is a not-for-profit company, registered at Companies House. Company Number 10934941, the objects of which are:
a. To install and maintain Marcus Vergette's Time and Tide Bell on the Lincolnshire coast as a work of art for the public benefit.
b. To raise public awareness of Lincolnshire's coastal environment and people's relationship with the sea throughout history and into the future.
c. To raise public awareness of the effects and consequences of global warming, climate change and sea level rise.
d. To support the use of art in exploration of Lincolnshire's changing coastal environment and the consequences of global warming, climate change and sea level rise.

The Friends of the Lincolnshire Time and Tide Bell is open to all who support the Objects of the Company and there is no membership fee. If you would like to join us please send us an e-mail via our website: http://bit.ly/TimeandTideBell

We are grateful to the many private donors, to the Arts Council England National Lottery Fund and the Lincolnshire Coastal Destination Business Improvement District for their financial backing and, most of all, to the community of artists, amateurs, students and professionals alike, who have contributed their time and talent so generously to make this project possible. If a few people gain a little more awareness of the North Sea's biodiversity, it will all have been worthwhile.

The texts accompanying each illustration have been written by the artists themselves. Extended versions, including references and sources, artists' biographical details and links to their websites, can be found at the #200Fish website: http://bit.ly/200Fish

Fish #001 Atlantic Hagfish *Myxine glutinosa* Laura Mabbutt

Hand felted undyed wools and silks and included glass beads as teeth and gills

Hagfish are often seen as ugly fish that live in the dark depths of the sea. I want to rethink this impression by creating a light, soft and beautiful creature from wool, with silk used to create the undulating tail. The rasping teeth of the hagfish and the gills are represented by glass beads. The position of my hagfish tries to emphasise the beautiful movement of the fish as it twirls about rasping food from a carcass.

I chose to create a Hagfish using wet-feltmaking techniques. This wet and soapy making process mimicked how I imagine a real hagfish might feel in my hands.

Fish #002 European River Lamprey *Lampetra fluviatilis* Jonathan Downes

Digital imaging

Fish #003 Sea Lamprey *Petromyzon marinus* Helen Green
Oil based 'Polychromos' pencils blended with a solvent 30 x 42 cm

The Sea Lamprey

I look like an eel but without the fins, long, agile and strong.
My mouth is large and jawless with lots of sharp teeth.
I am a parasite happy to live on my host in fresh or salt water
With my suction like mouth I attach myself to the skin of my host.
My victim will eventually die from blood loss or infection.
Yet after I spawn I quickly die and become food for other fish
Some Europeans even like to eat me!

Fish #004 Rabbitfish *Chimaera monstrosa* Nikita Spires
Oil

The rabbit fish, also known as a rat fish due to its long tail lives around the Eastern Atlantic, so northern Norway and Iceland. The rabbit fish has a mildly venomous spine that can cause painful stings, despite its innocent appearance. In Latin, its name *Chimaera* means "marine monster", and it can grow up to 1.5 m (5 ft.) long, and weigh 2.5 kg. It's a relative of sharks, and typically found in small groups that feeds on bottom-living invertebrates. Sadly it's facing endangerment, even though the rabbit fish does not have any real commercial value they are caught in large numbers as the bycatch of deep-sea trawlers which is seriously depleting numbers.

I selected the rabbit fish as its name struck out on the list, and when I looked at its appearance I was fascinated. It looked so sweet and rabbit like, but has venomous spines. The name was intriguing and I wanted to have a play on the name and create a more rabbit like rabbit fish. As a young artist, I have just finished my art diploma, and currently taking a gap year. I specialise in ocean awareness, such as plastic pollution and endangerment of species. I am currently an 'artist in residence' at The Deep, in Hull.

Fish #006 Longnose Velvet Dogfish *Centroselachus crepidater* Ruth Bateman

Acrylic inks, watercolour and ink 13 x 23 cm

This fine shark specimen is known also as a sleeper shark and forms part of the *Somniosidae* family. He is predominantly found cruising along in the sub tropical seas of the Southern hemisphere, reaching depths between 230 - 1500m, and is found around the world including in British waters. Longnose as we shall refer to him has notably two dorsal fins which are equal in size and length, he tends to be black or blackish brown in colour and has a very long distinct snout! - hence the name! Sleek and slender in stature he is ideally built for circumnavigating the depths and vastness of the sub tropics.

Fish #007 Greenland Shark *Somniosus microcephalus* Margot Ravenscroft

Acrylic on canvas 40 x 50 cm

The Greenland shark, *Somniosus microcephalus*, is also known as the gurry shark, grey shark, sleeper shark, or by the Inuit name Eqalussuaq.

They are big: The second largest carnivorous shark after the great white, it lives in deep Arctic waters.

Long lived: Possibly living for over 200 years, they have the longest lifespan of any know vertebrate.

They like it cold: A true sub-Arctic shark tolerating Arctic temperatures all year round. Generally found in very cold waters (-1°C to 10°C).

They go deep: Observed down to 2,200 meters deep.

In the eye: Arctic Greenland sharks are commonly parasitized by the copepod Ommatokoita elongata. This parasite latches on to the shark's eye and destroys the corneal tissue, this makes the shark practically blind.

Eating anything: An opportunistic predator that will eat just about any meat it finds, either dead or alive.

Poisonous but edible: The natural anti-freeze found the shark, trimethylamine oxide (also regulates their osmotic pressure). During digestion, TMAO breaks down into trimethylamine (TMA). For people eating this shark the TMA causes intestinal distress and neurological effects similar to extreme drunkenness, and is deadly in large quantities. Early settlers of Iceland and Greenland figured out a way around this. Burying the meat in the ground for 6 to 12 weeks, exposing it to several cycles of freezing and thawing. Then meat is hung up to dry for several months, served in small cubes the end product, Hákarl, is considered a delicacy.

Fish #009 Birdbeak Dogfish *Deania calcea* Jonathan Bean

Digital collage 21 x 30 cm

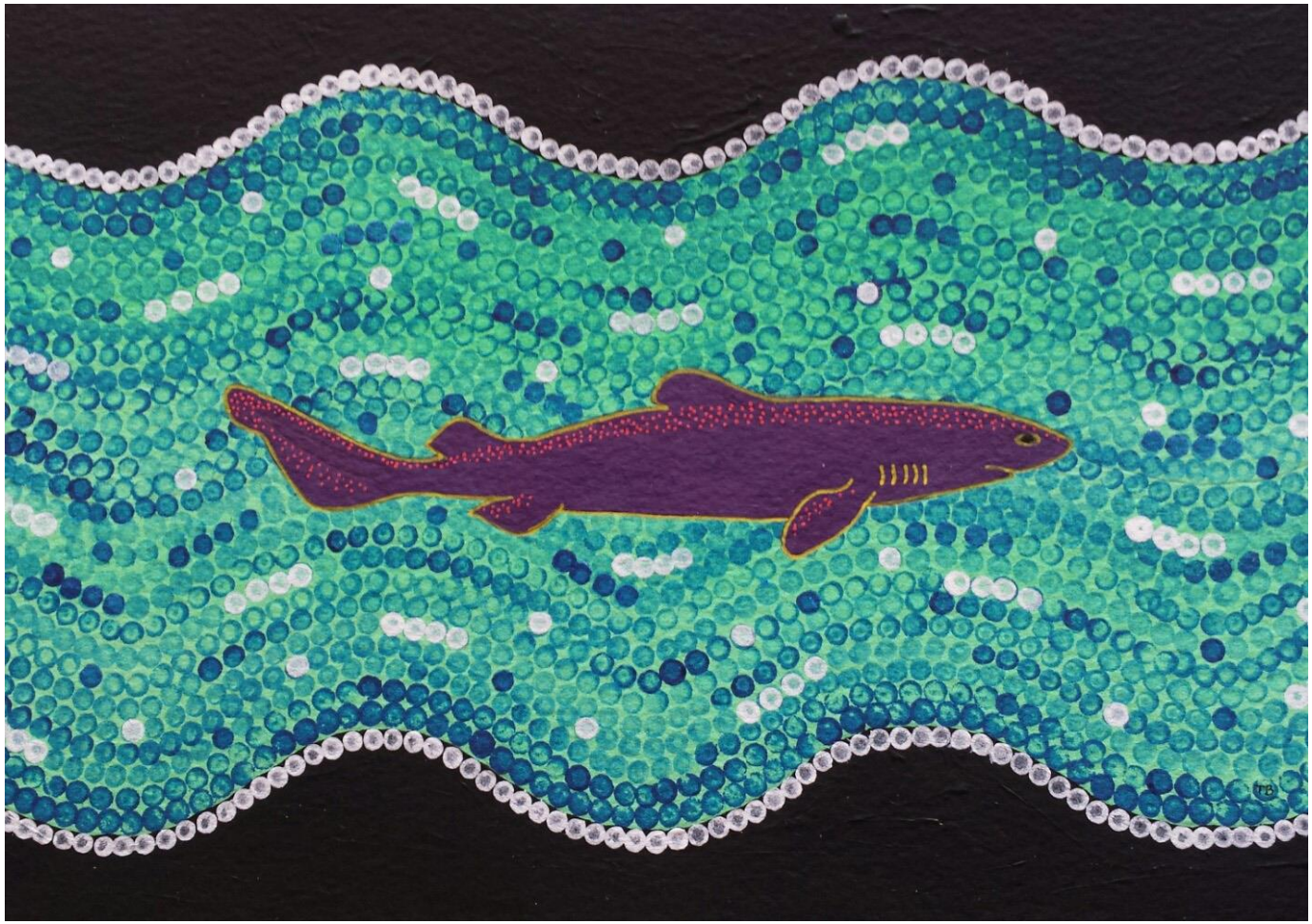
Kingdom: Animalia Phylum: Chordata
Class: Chondrichthyes Order: Squaliformes
Family: Centrophoridae Scientific Name: Deania Calcea (Lowe, 1839)
Common Name(s): Birdbeak Dogfish, Brier Shark, Shovelnose Spiny Dogfish
Region: Europe
Characteristics: The tailfish of Deania calcea bear unusual resemblance to the hindquarters of a dog and it's snout to the beak of the Oystercatcher, hence it's common name "Birdbeak Dogfish". These traits have given Deania calcea a near mythical status.
Habitat/Ecology: On or near the bottom of the continental slope and abyssal plain in depths from 70 to 1,450 m.
Population: An extremely scarce mid slope species of deep water dogfish. Population unknown.
Current status: Extinct.

Additional Data: A species once prized both for the healing properties of its flesh and oil, and for it's unusual bodily characteristics amongst collectors. Population diminished rapidly in the early half of the 19th Century, when it is thought to have been fished into extinction by black market traders. Occasional stories have surfaced of sightings but there remains no evidence, and the species is currently still classified as extinct.

Fish #010 Kitefin Shark *Dalatias licha* Tony Baxter

Acrylic on paper 20 x 30 cm

'Are You Looking at Me?'



After being around for 45 million years, *Dalatias licha* is pretty good at being a shark. The origins of the name 'kitefin' are unclear and none of the fins remotely resemble kites. It is called the Black Shark in Australia and the Seal Shark in South Africa.

The species is found all over the planet living mostly on and at the edge of continental shelves. It has an elongated body with thin fins and large eyes, a short snout, thick lips and mouth full of interlocking teeth. The jaws are hugely powerful with the upper jaw consisting of smaller pointed teeth and the lower jaw made up of much larger triangular, serrated teeth. The kitefin shark may be dark chocolate brown, greyish black, cinnamon, or violet brown in colour. The kitefin is an aggressive, powerful, solitary predator that prowls around the ocean floor eating many types of prey. These range from bony fish, squid, octopus, and crustaceans but it also attacks species much larger than itself that it has no hope of killing such as large shark species and whales, settling for a few mouthfuls before making a quick getaway.

Living in deep water - between 200 and 1800 metres - this shark poses no threat to humans. They live mostly solitary lives only coming together in groups to mate. Embryos hatch inside the female's uterus and are sustained throughout a two year pregnancy by yolk. Up to 16 shark pups are born at a time each between 12-18 inches long. Few young kitefins have been seen and it is thought that they develop and mature in as yet undiscovered deep ocean nurseries.

Kitefin are eaten in Asian countries such as Japan and are considered a delicacy in Madeira and the Azores. Its liver is rich in oil and carcasses are processed into fishmeal once the liver is removed. Kitefin shark have been caught by deep water gill nets and long-lines targeting the species, and also as bycatch by deep-sea trawlers which dispose of any kitefin sharks as unwanted. Numbers of kitefin shark have been greatly reduced by over-exploitation, made worse by commercial vessels pushing into deeper water to catch the species present there. The International Union for the Conservation of Nature classes kitefin shark as 'Near Threatened'. However, in Europe the species is classed as 'Endangered' with a declining population trend.
If you wanted a deep ocean tag-wrestling partner, the kitefin would be your go to shark of choice. Despite being only 5 feet long and weighing in at 80kg, it is an unexploded powder keg of violence. The kitefin is convinced it is a great white or a bull shark (only harder) and would have the tag name 'Deadeye Killer'. It is fearless and slightly unhinged - as well as attacking anything that moves in the ocean, upper teeth from the kitefin have been found embedded in deep sea fibreoptic cables, no doubt bitten after being mistaken for monster black puddings.

Fish #011 Bramble Shark *Echinorhinus brucus* Carey Jones

Acrylic 30 x 23 cm

It's a wonder this shy and solitary shark doesn't have an identity crisis, originally described as *Squalus brucus* by Bonaterre in 1788, its name was later changed to the currently used *Echinorhinus brucus* (Bonaterre 1788). It's derived from the Greek *echinos* meaning "sea urchin, hedgehog" and from rhinos meaning "nose" which describes its appearance perfectly! It also has many other names the world over; a few follow: In English: mango-tara, spinous shark, and spiny shark and, in many other languages, *achinoskylopsaro, kavouromana* & *Karcharias* (Greek), *Alligatorhai* & *Brombeerhai* (German), *Braamhaai* (Afrikaans/Dutch), *chenille* (French), *civili köpek baligi* (Turkish), *kalb* (Arabic), *kikuzame* (Japanese), *murruna tal-fosos, murruna tax-xewk* and *murruna xewwikija* (Maltese), *okahai* (Finnish), *peixe-prego* (Portuguese), *peshkagen therrës* etc. etc.

Despite being so widely named it is a rare shark living in the very deepest parts of the seas and isn't often seen or caught. When it is it's generally by anglers as a game fish or for traditional medicine in southern Africa. Its short, stout, flabby body and sluggish nature are well suited to its life as a deep-sea dweller (c.900 metres) and the lack of a classic 'Jaws' dorsal fin means it isn't seen as a threat to humans. It varies in colour from olive or purple, to dark grey or black with metallic/luminous reflections on the dorsal side and its body scattered irregularly with distinct thorn-like projections and, occasionally, darker blotches.

According to the World Conservation Union (IUCN), the bramble shark is a lonely soul - rare and drawn to deep water - and has only been recorded sporadically at widely dispersed localities throughout the world. Very little is really known about Bramble - it's likely to be a slow-growing, late-maturing species but its breeding habits etc. remain a mystery. The good news is that it is not taken in commercial fisheries due to the depth at which it occurs but the bad news is (as always) it is on the decline in the northeast Atlantic. However, due to the lack of data the IUCN has not categorised it as yet - it is anticipated, though, to reach the "Threatened" category as more data becomes available.

Fish #012 Great Lanternshark *Etmopterus princeps* Siani Turner

Watercolour 21 x 29 cm

On hearing the word shark, the great lantern shark is probably not what you would picture. At an average of 89cm long, this inhabitant of the ocean depths (typically within depths of 350 to 2,213m) is stout with a brown/black colouring and has tiny light producing organs down each side of its body. This was originally thought to be just to aid its camouflage from its many predators, although scientists now believe this is also a way for the sharks to communicate with each other. The great lantern shark also has very large and sensitive eyes which are useful for finding its way around the dark depths.

Like many other deepwater shark species, the biology of the Great Lanternshark is unclear and owes to more research, however, examinations of the stomach contents of trawled catches indicate that it mainly feeds on fish, cephalopods and crustaceans. As not much is known about the great lantern shark, the conservation status is currently at dd (data deficient), this means that scientists would like to know more about the species as there are many details about this little bottom dwelling shark which are still unknown.

The main threat to the great lantern shark is that they tend to be a bycatch of deepwater trawler fishing. Exactly how many Lanternshark this affects however is unknown due to poor record keeping by fisheries and an overall lack of information on the species.

Fish #013 Velvet Belly Lanternshark *Etmopterus spinax* Esme Dodsworth Linoprint 21 x 29 cm

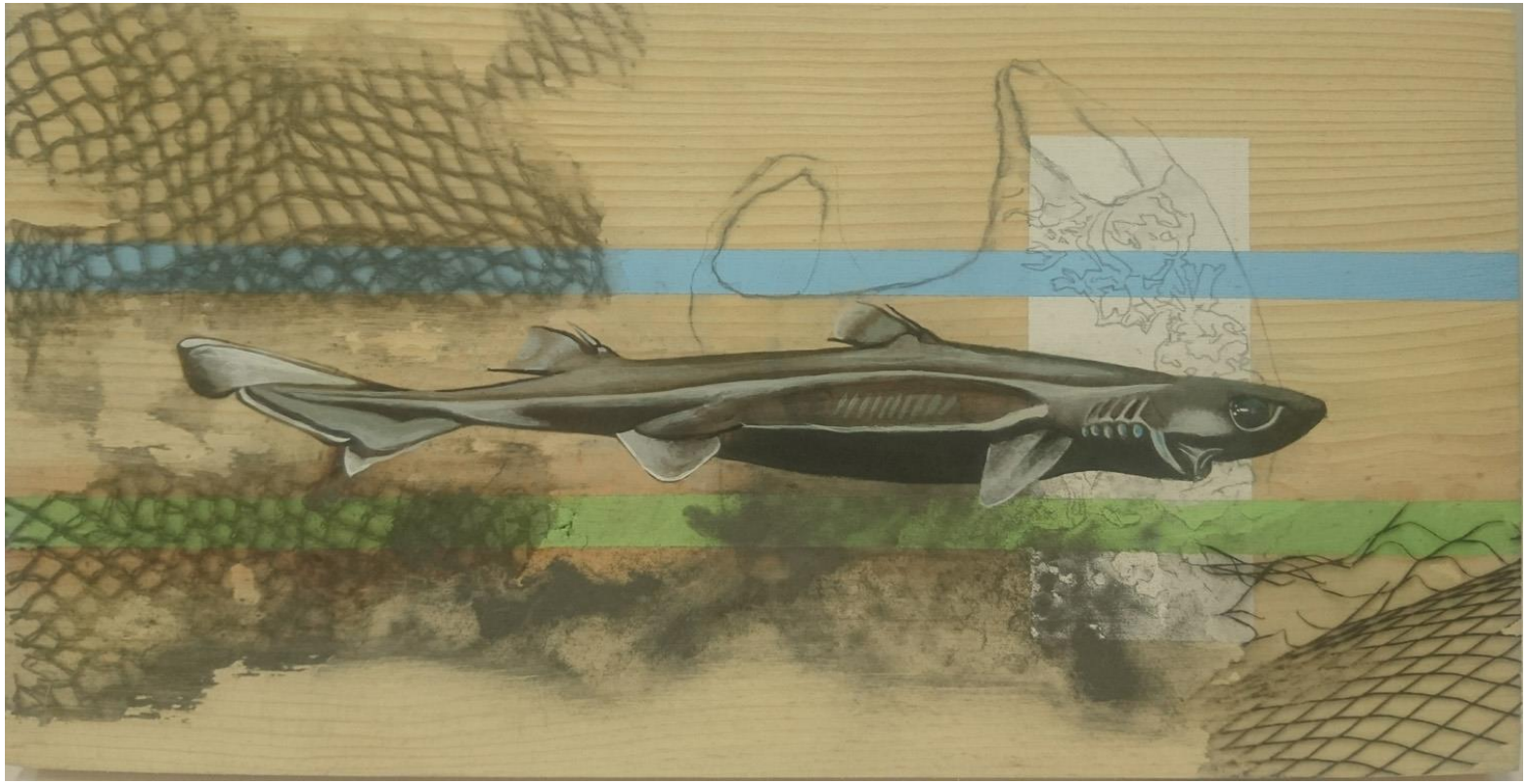
The Velvet Belly Lanternshark is a species of dogfish shark, found in the northeastern Atlantic Ocean. One of the smaller sharks, normally no more than 45cm long, so named velvet belly due to its black underside and brown colouration over the rest of the body. It has been assessed as least concern by the IUCN, though heavy numbers are caught as bycatch in the deep water. However its slow reproductive rates are raising conservation concern.

Your velvet under
Makes you seem so soft
But you are a tiny shark
That is well and truly tough
One of the few
To keep going strong
A little Fighter
Keep Swimming along

Having Grown up in Boston, Lincolnshire, right by the Boston docks, I have grown with the sea and the fishing industry all around me. I have seen the way it has impacted many lives as a living, and also seen how the industry and climate change has changed the local landscape.

Fish #013 Velvet Belly Lanternshark *Etmopterus spinax* Moira Buchanon

Mix Media on Upcycled Wood Panel 19 x 36 cm



This fish is commonly known as the Velvet Belly. Maturity size range 33 - 36 cm, max 60cm. Depth range possibly 70m-2000m and is of the small shark species. As a deep-sea fish, it feeds on prawns, crustaceans, small fish, and squid. The Velvet Lantern can be located at Rockall Trough and Faroe-Shetland Channel. Other habitats include parts of the British Isles, Europe and of the north African coast where waters are deep.

Velvet Belly Features:

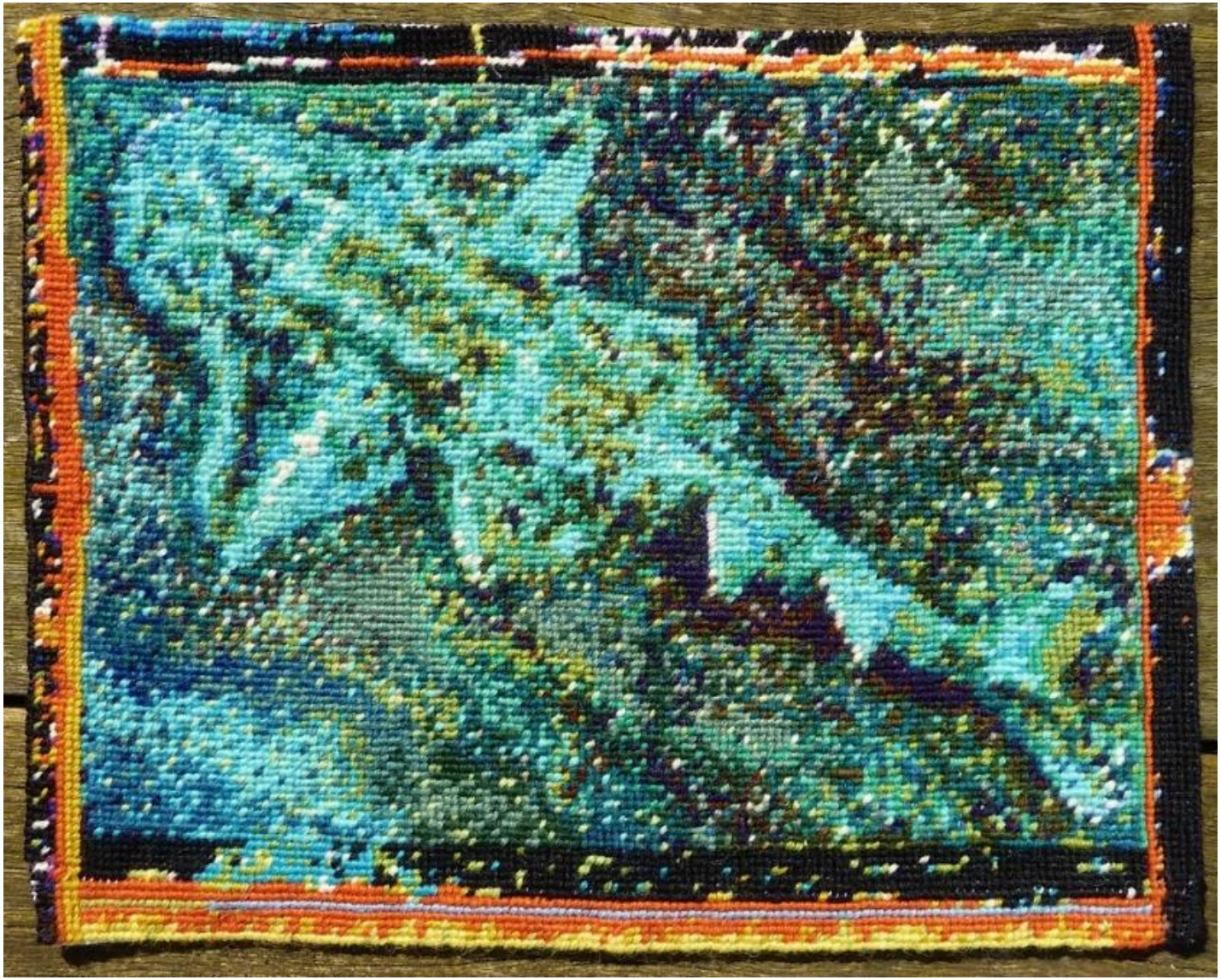
Lower half of the body is black, upper body is grey to brown.
Fins light grey/white. Tail is fairly long.
Skin rough in texture.
Predominantly large eyes and mouth.
Small sharp teeth.

An interesting feature of the Velvet Belly is its ability to deter predators by producing light from cells within its skin - bioluminescence. It's believed this feature located on the bottom part of the body and ridges of the dorsal fins also confuses its prey. The Velvet Belly's habitat is affected by commercial deep-water fisheries in the Mediterranean and north Atlantic causing undocumented deaths, or multiple discard of this species in poor state resulting in eventual death.

I chose the Velvet Belly Lanternfish for its beautiful linear quality, wide eyes and broad mouth. By utilising upcycled wood from a palette and referencing a plastic bag drawn and painted onto the wood canvas, I was making a direct evaluation of human content of the ocean. In recent years the pollutants caused by us appear to be reaching dangerous levels. Obviously other dangerous elements from hard plastics (bottles, containers), metals, chemicals etc are as hazardous to the marine environment. I feel angered and disappointed at the lack of responsibility we have in the care-taking of our most precious resource â€“ the ocean and its inhabitants.

Fish #015 Angel Shark *Squatina squatina* Janis Bowley

Wool needlework 23 x 29 cm (with borders from fish finding sonar imaging)



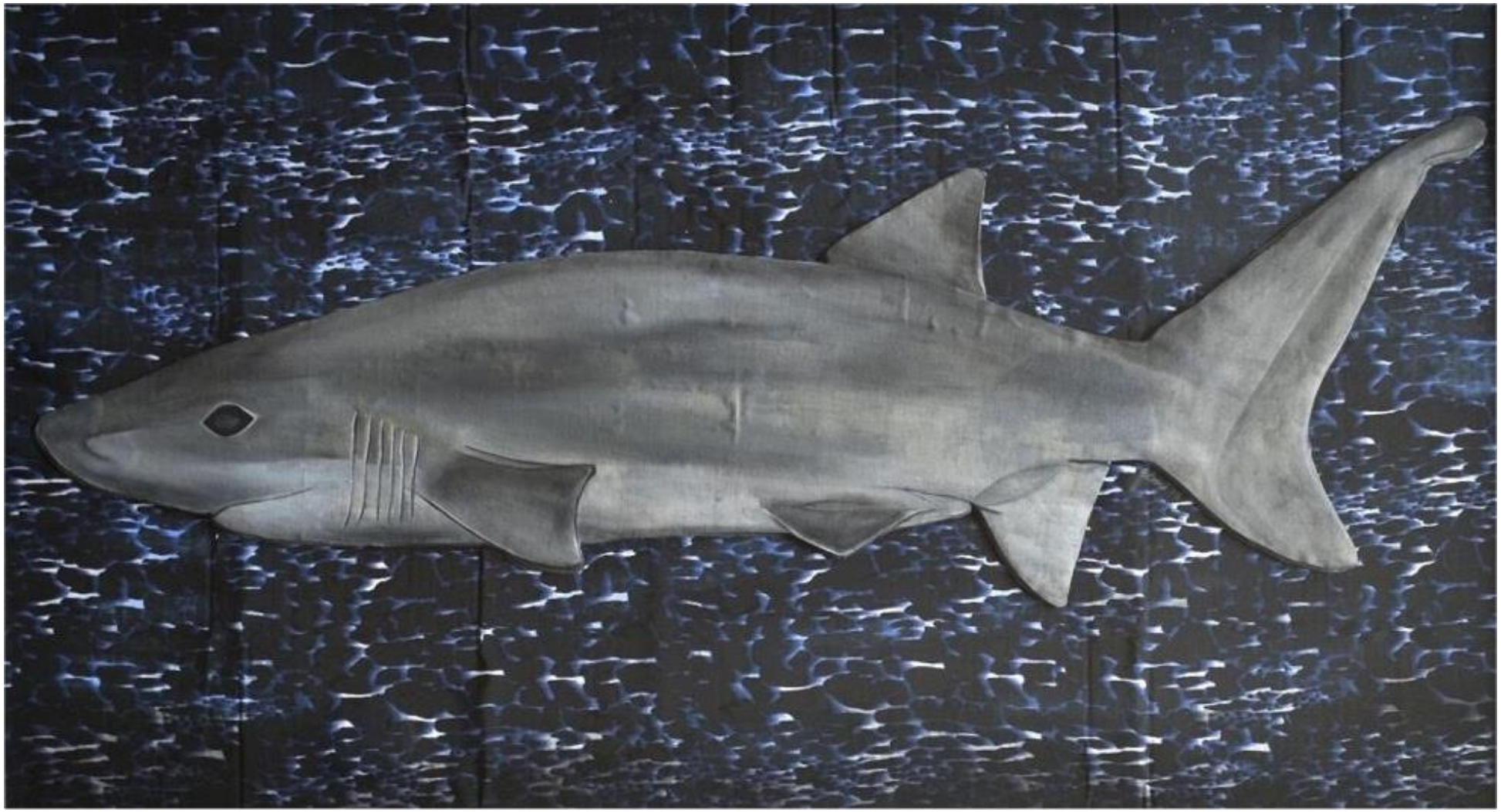
The Angel Shark family (*Squatinidae*) is the second most threatened group of sharks and rays in the world. *Squatina squatina*, the Angel Shark, was once widespread throughout the Atlantic, from Norway to Mauritania, and the Mediterranean to the Black Sea, however it has almost disappeared throughout its natural range, mainly due to overfishing. Today the Canary Islands are their last refuge, however not without threat. All *Squatina* species are protected within the Balearic Islands marine reserves. Northern ranging Angel Sharks are seasonally migratory and move back north during the summer.

A factor hampering effective conservation is a lack of scientific information about their ecology. However this is some of what we do know: Angel Sharks can grow to a length of 1.5 m (5 ft), they spend most of their time on the sea bottom buried and camouflaged in the mud or sand with just their eyes protruding. From this position they ambush prey with startling speed, nabbing flatfish, skate, and crustaceans or molluscs. Angel Sharks are a relatively small sized shark and are not a particularly dangerous, however if provoked, their strong jaws and sharp needle-like teeth can inflict a painful bite to a human. Female Angel Sharks develop their young within eggs inside their bodies until they hatch, giving birth to live pups (24 to 30 centimetres long). Gestation is eight to ten months and a litter varies from 7 to 25 pups. Conservation measures are urgently needed to assure the preservation of this unusual and distinctive shark. "Without sharks, marine eco-systems face an uncertain future. Our vision is a future where sharks, skates and rays thrive within a globally healthy marine ecosystem." Shark Trust.

Fish #016 Bluntnose Six-gill Shark *Hexanchus griseus* Andrew Whyley Paint, pastels and pencil 25 x 50 cm

The Bluntnose Sixgill Shark has a large body and long tail. The snout is blunt and wide, and its eyes are small. There are 6 rows of saw-like teeth on its lower jaw and smaller teeth on its upper jaw. Skin colour ranges from tan, through brown, to black. It has a light-coloured lateral line down the sides and on the fins' edges, and dark coloured spots on the sides. Its pupils are black and its eye colour is a blue-green. The blunt-nose six gill shark can grow to 26 ft, adult males generally average between 10 and 11 ft while adult females average between 11 and 14 ft. The Bluntnose Sixgill Shark resembles many of the sharks from the Triassic period...a living fossil! I have loved sharks all my life and have an opportunity to swim with Basking sharks in Scotland this summer ... I can't wait!

Fish #016 Bluntnose Six-gill Shark *Hexanchus griseus* Eleni Christoforou Acrylic paint on fabric 54 x 91 cm



The deep and dark habitat at which the Sixgill Shark lives is keeping many secrets about this organism, mysteries that scientists have yet to discovery. One of this shark's main characteristics, and the source of its name, are the six gills at each side of its head, one more than most shark species. It is thought that the higher number of gills permits the shark to reach depths up to 2000m allowing more water and thus oxygen to reach its circulatory system. This solitary by choice shark would meet a partner for the sole purpose of mating. In contrast to most animals, the female has a mean length of 4.20m, one meter larger than the male. Another feature is that, females are ovoviviparous, usually characteristic of amphibians, meaning that the eggs hatch within the mother and the young are born live. *Hexanchus griseus* (Latin name), usually wander at deep waters by day around tropical and temperate world oceans and come to the surface at night to prey on other sharks, fish, squid, seals and many more that cross his path. Its six rows of teeth and feeding habits should not scare us though as there was only one provoked human attack in the past 500 years. On the flip side, the Sixgill Shark should be afraid of us, as it can be found fresh, frozen, dried or salted on our dinner table, minced in fish and pet food, food supplements as a source of liver oil and in fishermen's boats as game or bycatch; thus, classified as 'Near Threatened'.

Fish #018 Basking Shark *Cetorhinus maximus* I Bella Bee
Oil on paper 43 x 60 cm

Basking Sharks are the second largest shark on the planet, yet they are passive feeders, which means they do not actively hunt. Instead, they glide near the surface of the water, mouth agape, filtering zooplankton from these precious few nutrient-rich inches. It is often in death they are perceived as more monstrous, decomposition leaving the lower jaws to drop away; giving the appearance of a long thin neck. No wonder this beast has been called sea-serpent, or even a relative of the Loch Ness Monster when their corpses are found washed up on shore.

The tale of the Stronsay beast is an example of this. Washed up on the high tide line, 25th September 1808, local men discovered the corpse, one saying it was unlike anything he had encountered before. Lying on the rocks were the remains of a large serpent-like creature, with a long, eel-like neck and three pairs of legs. The beast was described as serpentine, measuring exactly 55 feet long, with a neck measuring ten feet three inches long. The head was like that of a sheep, with eyes bigger than a seal's. Its skin was grey and rough to the touch. However, if stroked from the head down the back, it was said to be as "smooth as velvet".

We still know very little about this gentle giant. They winter in the Caribbean or Florida at great depths, yet little is really known about this creature, even where they give birth is unknown. Sadly, still hunted for their 'leather' and fins, basking shark numbers are at a dangerously low level.

Fish #018 Basking Shark *Cetorhinus maximus* II Bella Bee
Oil on paper 43 x 60 cm

Fish #019 Porbeagle Shark *Lamna nasus* Doug Fossey Watercolour 36 x 25 cm

The Porbeagle Shark, also called *Lamna nasus*, comes from the family of *Lamnidae* sharks. It is mostly found in cold and temperate waters of the North Atlantic Ocean. This is a species of the mackerel shark and is a close relative of the salmon shark. The Porbeagle can reach over 8 feet in length and can gain weight of 135 kilograms. They are normally white at the bottom and grey on top giving it some nice camouflage for hunting.

Fish #020 School or Tope Shark *Galeorhinus galeus* Carey Jones

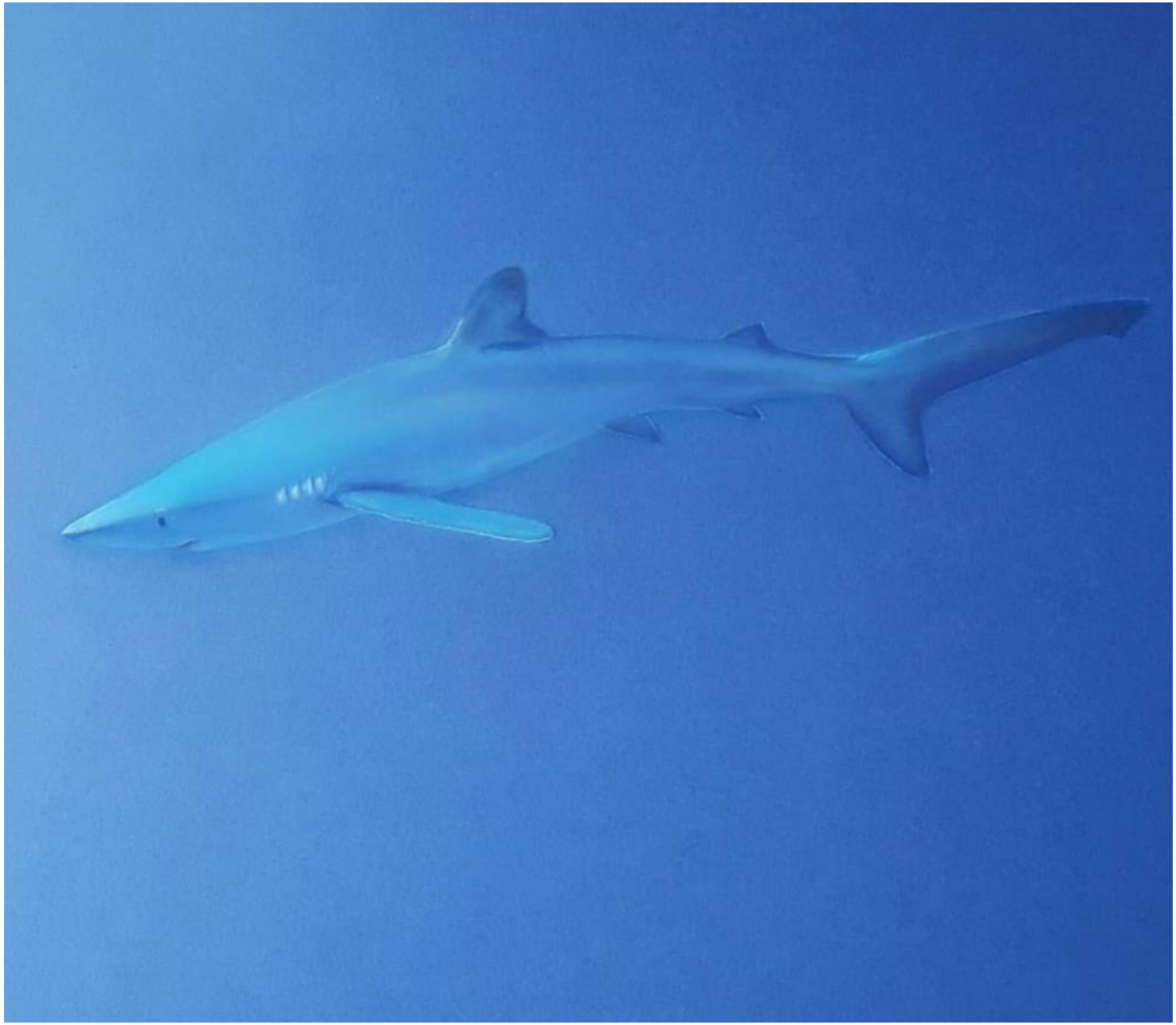
Acrylic on canvas 25 x 20 cm

The School Shark has many names - the tope shark, snapper shark, and soupfin shark. The last name is a bit of a giveaway as to the reason for the (surprise surprise) over-fishing of this shark - it is prized the world over for its flesh, its fins, and its liver, which has a very high vitamin A content. Worse still there are very few fishing restrictions, with Australia, New Zealand, and California being the only regions to take any action to protect school sharks. There have also been too few studies to date so it's nigh on impossible to know how many School Sharks are really are out there, and whether the few existing restrictions are enough to protect them. Despite the lack of information the IUCN is worried enough to classify the School Shark in its Red List of Threatened Species.

School Sharks favour temperate seas at depths down to about 800 m (2,600 ft) where it grows up to 2 m (6 ft 7 in) long. They are amazingly well travelled being a migratory species. Animals tagged in the United Kingdom have been recovered in the Azores, the Canary Islands, and Iceland. Sharks tagged in Australia have travelled distances of 1,200 km (750 miles) along the coast and others have turned up in New Zealand. They tend to travel in schools which are segregated by size and gender, the females give birth to up to 38 'pups' after a one year gestation period. They have very large, almond-shaped eyes which are fantastic at spotting their prey, typically bottom-dwelling fish, crustaceans, and molluscs. Thankfully this is one breed of shark where humans aren't on the menu, so, return the favour and don't eat him (or her)!!

Fish #021 Blue Shark *Prionace glauca* Sarah Barnard

Acrylic and chalk on board 42 x 59 cm



This abundant pelagic and oceanic shark is widespread in temperate and tropical waters. It is relatively fast-growing and fecund, maturing in 4–6 years and producing average litters of 35 pups. The Blue Shark, *Prionace glauca*, is taken in large numbers (an estimated 20 million individuals annually), mainly as bycatch, but there are no population estimates and many catches are unreported. The few fishery assessments carried out suggest relatively little population decline. There is concern over the removal of such large numbers of this likely keystone predator from the oceanic ecosystem.

IUCN Red List

Fish #023 Common Smooth-hound *Mustelus mustelus* Dave Wright

Pallet-wood boards 57 x 104 cm

Mustelus mustelus, Gummy Shark, Common Smooth-hound, Smut, Smooth Dogfish. If you happen to be a shrimp..... this small Shark is JAWS! This piece is made from broken down pallet wood which has been de-nailed, cut and sanded. Once prepared it is fixed together then backed for rigidity. A template of the subject is created, enlarged then recreated on the framework. Once on, it is cut out using a jigsaw, sanded again, finished then the shape is backed using thin plywood. The wood is 'aged' using a wax based boot polish, sanded a third time, framed and sealed using thinned down floor varnish which also seals.

I enjoy making this type of piece, using wood that no one looks at twice, yet may have been around the World. Pallet wood is surprisingly good to work with, forgiving, beautiful and carries scars that are natural and man-made. I cannot think of one single thing that did not sit on top of a pallet at some point. Back to the Smooth Hound.....

Fish #024 Blackmouth Catshark *Galeus melastomus*
Serena Sussex
Mixed media on canvas 81 x 81 cm.

The Blackmouth Catshark can be found in the North-eastern Atlantic Ocean from Iceland down to Senegal and sometimes the Mediterranean Sea. It can be found in the depth of 150-1,400 metres on the muddy bottoms of the ocean. The adult length varies from 67 to 97cm. It is a slim built fish with marble effect brownish markings with razor sharp teeth and a protruding nose. They are slow swimming and like to feed on a variety of crustaceans and fish.

When foraging, the Blackmouth Catshark swings its head from side to side to employ its senses more effectively. It likely relies mainly on smell and electroreception to find food, and less on vision because of the dark murky waters on the seabed. Females producing batches of up to 13 egg cases throughout the year.

In the north-eastern Atlantic, this shark is being increasingly targeted by fishers following the decline of other deepwater shark species. With the commercial approach, using large trawling nets, many unwanted creatures are trapped and discarded by fishermen so this must stop. It is among the most commonly caught sharks in trawls targeting deepwater lobsters and shrimps.

Fish #025 Small-spotted Catshark, *Scyliorhinus canicular*, Jenny Oyston

Fish #026 Nursehound, *Scyliorhinus stellaris*, Paulette Strong
Watercolour 21 x 29 cm

The name is thought to have come from fishermen's stories as they believed the nurse fish looked after the younger members of its family. Other names associated with this fish are Bull Huss, Greater Spotted Dogfish, Greater Spotted Catshark, Flake and Rigg. In France it is known as the Grande Roussette. The range is from south Scandinavia to the Mediterranean and the north west of Africa. The main areas around the British Isles are along the English and Bristol Channels down to the Cornwall Coast with few now in the North Sea. Kit is known to breed in the River Fal in Cornwall and Wembury Bay, South Devon and is generally found among rocks and algae at a depth of 20-60 m. Nursehounds have nocturnal habits and generally hide inside small holes during the day, often associating with other members of its species. As its Latin name, *stellaris* suggests it is covered in little brown and black starry spots from head to tail. It has cusped and erect front teeth 44-56 in the upper jaw an 38-46 in the lower jaw but less formidable than other sharks. It does have another defence where it throws its body around the arm which holds it and grates the body of the enemy with its rugged spines using its skin like a rasp. The rough skin (called "rubskin") was once used to polish wood as a sandpaper. Growing up to 1.6 m long. With a life span of 19 years. Oviparous, with a single egg per oviduct. Embryos feed solely on yolk. Size at hatching about 16 cm. and take about 10 - 12 months to hatch. Like all sharks the Nursehound is slow to mature and only start laying between 9 and 41 embryos a year from around 4 years of age. It feeds on crustaceans, cephalopods and bony fish, juveniles eating more crustaceans than adults. The Nursehound is near threatened due to overfishing, often by gill nets, bottom set long lines and bottom trawls. Habitat degradation is also a significant factor. As a food it is known as rock salmon, rock eel and huss. This species is protected in six marine reserves around the Balearic Islands, but no other species-specific conservation measures are in place throughout its range.

Sleek & silent over the rocks
I watch the great fish glide
Searching the nooks and crevices
Weaving from side to side

Through the ancient forest of kelp
Wending his way unknown
With North Sea waters running deep
The Nursehound swims alone

Could he be looking for a mate?
Or for a lunchtime snack
Smoothly picking his way ahead
And never looking back

Take-care you wondrous mini-shark
There's danger all about
Beware the hooks of wily men
Who wish to pull you out

And show you off to all their friends
Then take you home for tea
How better it would be for us all
To leave you in the sea!

Fish #026 Nursehound *Scyliorhinus stellaris* Mike Butterworth Oil 80 x 100 cm

It's not often that a fish has so many common names: Nursehound, Bull Huss, Greater Spotted Dog Fish, Rock Salmon, Flake, Grande Roussette. Scyliorhinus stellaris is not a bony fish; it is in fact a Shark. Strangely enough this dog fish is actually a Cat Shark from the Genus *Scyliorhinidae* (Cat Sharks).

Native of the North Atlantic it is found all around the British Isles and Scandinavia, to Morocco and the Mediterranean. It is found at depths of 2m to 125m on the continental shelf searching the rocky, rough or algae-covered seabed for molluscs, crustaceans, and bottom-living invertebrates. Living around 20 years, they can grow to a length of 1.7 meters (5.5ft). Like other catsharks, the Nursehound is oviparous in reproduction. Females deposit a large, single, thick-walled egg case, from March to October, securing them to bunches of seaweed. The eggs take 7-12 months to hatch. The Nursehound is a large, fairly stocky, cat shark with large and small black spots and sometimes white spots covering the dorsal surface. The saddle markings are obsolete, with small anterior nasal flaps that do not reach the mouth, no nasoral grooves, labial furrows on lower jaw only, and second dorsal fin much smaller than first. (www.fishbase.org). It was once highly valued for its rough skin (called 'rubskin'), which was used as an abrasive.

Nursehounds have nocturnal habits and generally hide inside small holes during the day, occasionally associating with other members of its species and the smaller *Scyliorhinus caniculus*. The common name 'Nursehound' came from an old belief by English fishermen that this shark attends to its smaller relatives, (probably the *Scyliorhinus canicula* - The Small Spotted Cat Shark), while the name "huss" may have come from a distortion of the word 'nurse' over time. On the ICUN Red List of threatened species, the Nursehound is classified as 'Near Threatened' as its population in the Mediterranean Sea seems to have declined substantially from over fishing.

Fish #026 Nursehound *Scyliorhinus stellaris* Jane Heighton
Ceramic

Nursehound - a song

Deep in the dark North Sea you swim,
Nocturnal huntress.....
Gregarious and free.....
When we leave you to be.....

The nurse of fishermen folklore,
Predated by man,
But you can become five feet long,
When we leave you to be.....

I wish for you to flourish,
Not be diminished by greed.
I swim in starry seas with you,
Deep in the North sea,
In my dreams.....
We leave you to be.....

At what cost we overfish these starry seas,
At what cost we overfish, to you and me,
At what cost.....

Deep in the dark North sea you swim,
Nocturnal huntress,
gregarious and free.....
When we leave you to be.....

Fish #028 Atlantic Torpedo *Torpedo nobiliana* Judith Culham-Elsdon
Finewriter ink pens and watercolou 14 x 21 cm

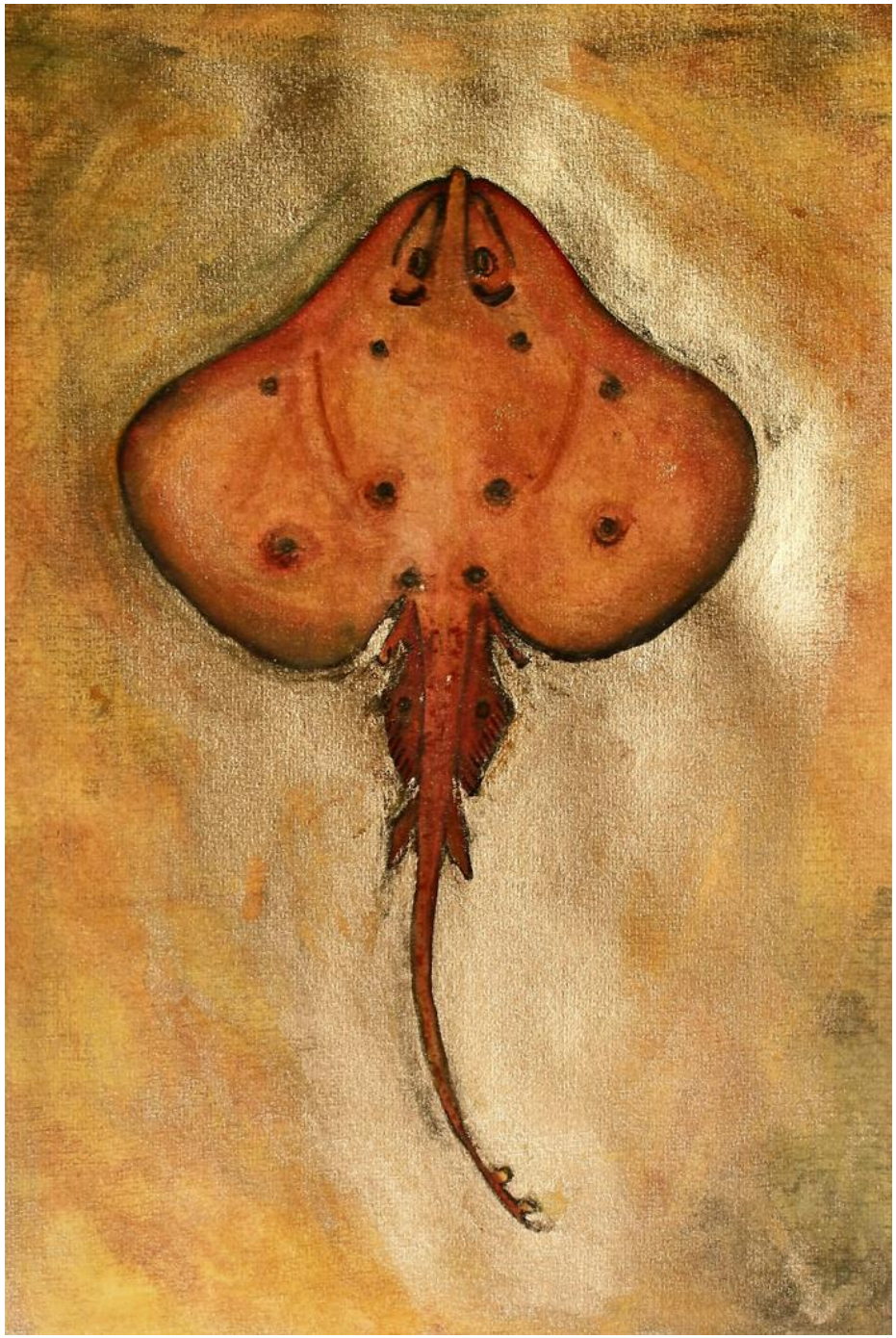
I was made aware of this project as I am a member of North Tyneside Art Studio. I am so excited to be apart of the Time and Tide #200 Fish project. The project aims to raise awareness of the biodiversity of the North Sea. My interest in this project comes about as I am from a family of fisherfolk; my dad, brother, uncles, cousins and friends were all once fishermen. Being born and bred in North Shields, the river Tyne leading out into the ocean has been close to the heart of the family and is responsible for putting food in our bellies and a roof over our heads. Alas with the decline of the fishing industry the fisherfolk of Shields have gone on the work offshore or on supply ships, with the call of the sea being in their blood. I chose the Atlantic Torpedo as I can relate to its solitude and nocturnal existence, happy. in its solitude unless it senses danger.

Atlantic torpedo, *Tetronarce nobiliana* is a part of the electric ray family. It is found in the Atlantic Ocean, from Nova Scotia to Brazil in the west and from Scotland to West Africa and off southern Africa in the east, found at depths of up to 800m (2,600ft). Young Atlantic torpedo's generally inhabited shallower, sandy or muddy habitats, whereas adult frequent open waters. The Atlantic torpedo is the largest known electric ray, it can be up to 1.8m (6ft) long and weigh 90kg (200lb). The Atlantic torpedo is solitary and nocturnal and is capable of subduing its prey by generating up to 220volts of electricity, which it also uses to defend itself against predators. The electric shock can be quite severe and painful, though it is not fatal.

The Atlantic torpedo was used by the Ancient Greeks and Romans in medicine because of its electrogenesis properties and became the namesake of the naval weapon. It eats mainly bony fishes, and also feeds on small sharks and crustaceans. Females give birth to around 60 young following a gestation period of one year. Prior to the 19th century, its liver oil was used as lamp fuel, but it is no longer of any economic value. The International Union for Conservation of Nature (IUCN) has listed this species as Data Deficient; it is caught unintentionally by commercial and recreational fishers, but the impact of these activities on its population is unknown.

Fish #030 Sandy Ray, *Leucoraja circularis*, Julia Colquitt Roach

Inks, Watercolour, Pencil and Finer Liner on A3 Watercolour Paper



The elusive offshore species the Sandy Ray, Leucoraja circularis is usually 70cms to 120cms in length. The Sandy Ray's colouration is variable from a light to a red brown, though in some documentation it is suggested that it can also be dark brown. The underside is white and on each pectoral fin there are usually four to six spots. The sturdy tail is longer than the body and the snout has a beautifully pronounced tip.

There is limited information about the ray's diet, though the likelihood is that it feeds on various bottom dwelling invertebrates, particularly crustaceans and small teleost fish. There is little information about the Sandy Ray's reproductive cycle, eggs are laid in pairs in soft substrates.

The Sandy Ray dwells at depths of 100 metres and more in the Northeast Atlantic and Mediterranean Sea in sandy or muddy sea beds along the edge of the continental shelf and upper slope. It is taken as bycatch in multi-species trawl fisheries and offshore bottom longlines. The species is suspected to have declined overall by more than 50% in the last three generations (29 years) and the Sandy Ray is now classified as an endangered species.

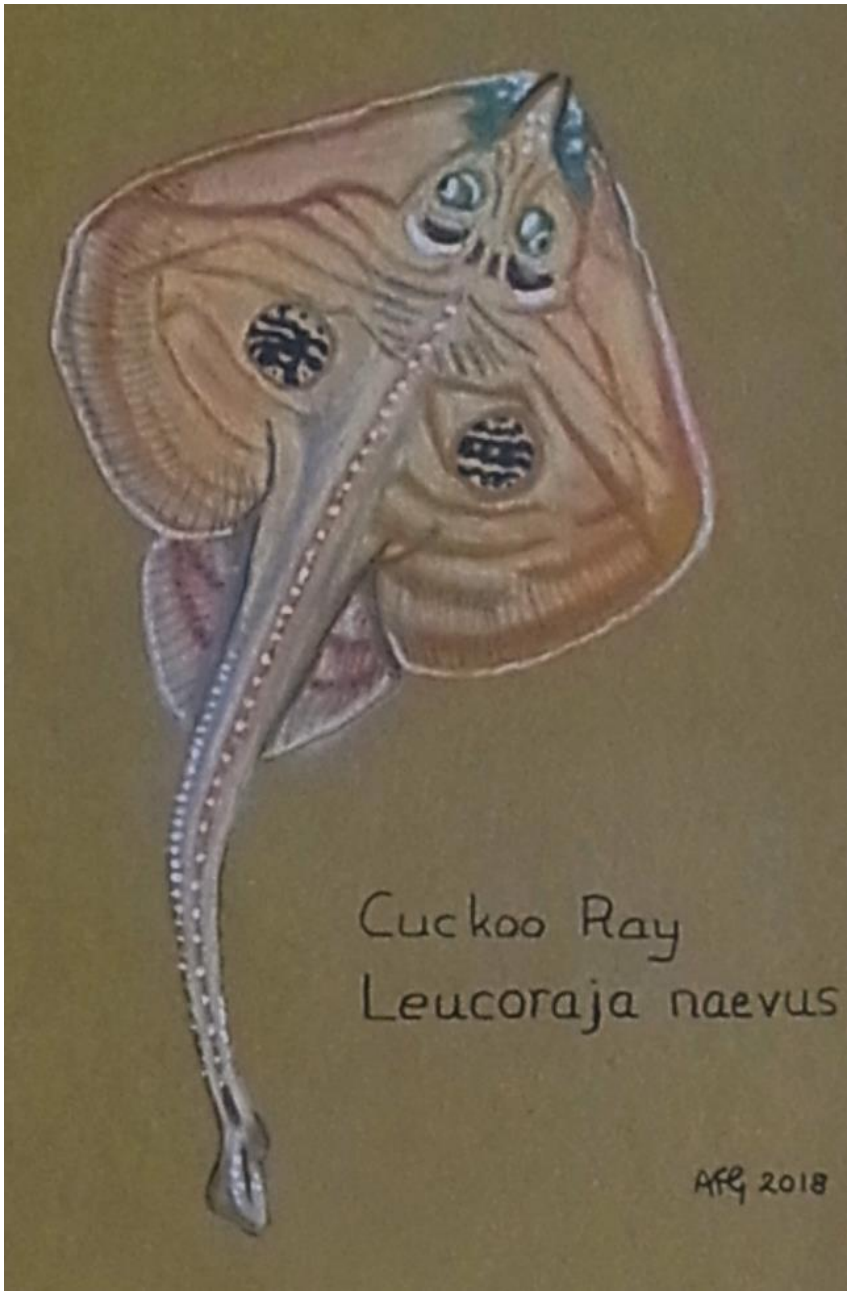
Fish #031 Shagreen Ray, *Leucoraja fullonica*, Kenneth Hayden
Acrylic on wood, 26.6 x 20 x 1.5 cm

Proving to be an elusive creature judging by the limited imagery available on the Internet and it's favoured habitat of deep, cold waters, I've done an interpretation of the Shagreen Ray, (aka, shagreen skate, fuller's ray, or leucoraja fullonica) as a cross between a creature swimming in a future algae-laden murk, thanks to global warming, while also giving a nod to it's most popular use as skin which is dried, dyed and tooled for covering a variety of decorative objects for the use of humans.

Leucoraja fullonica is actually a species of skate in the family Rajidae. According to Wikipedia, the shagreen ray can be "found in the eastern Atlantic Ocean, from Murmansk, Russia through Norway, southern Iceland, the Faroe Islands, the Celtic Sea, the northern North Sea and Skagerrak, to northern Morocco, including (infrequently) the western Mediterranean Sea and the Madeira Islands. It is absent from the shallow waters off England and Wales. This species occurs in relatively cold water on the upper continental slopes at a depth of 30-550 m. It is most common at depths of 200 m, but is found deeper in southern areas. It favors sandy and possibly also rocky habitats. The shagreen ray feeds on a variety of benthic animals, mainly fishes but also crustaceans."

Fish #031 Shagreen Ray *Leucoraja fullonic* Rachel Davies
Mosaic. Small tiles and glass on hand formed substrate 37 x 46 cm

Fish #032 Cuckoo Ray *Leucoraja naevus* Aileen Gilchrist Pastel 41 x 31 cm



A small ray belonging to the skate family. A flat fish with a pointed snout and short tail, rarely exceeding 5 lbs in weight. Identified by 2 large dark false eyes on the back. The dorsal surface is light grey to sandy brown whilst the ventral surface is white with prickly edges on the wings. Thorns can be found on the back, around the eyes and down the tail. Cuckoo Rays have 54 - 60 rows of sharp teeth enabling them to eat a diet of crustaceans and bony fish such as sand eels. They are commonly found around the South and West of the British Isles but can be found in all British waters and the Mediterranean Sea as far as Tunisia and Western Greece. Cuckoo Rays prefer deep shelving sandbanks and fast tidal currents. They lay between 70 and 150 eggs a year which are deposited in sand or mud. The egg cases are 50-70mm x 31- 4mm and have long horns. Hatchlings appear approximately 5 months later and are about 12 cm long. Youngsters are found some distance off shore, especially in the Western Irish Sea. The Cuckoo Ray is also known as the Cuckoo Skate, Butterfly Skate or Crownback. This fish is not under threat in UK waters.

Cuckoo Ray
Leucoraja naevus

Fish #034 Thornback Ray *Raja clavate* Chris Ruston

Watercolour paper, Ink, Pen and Ink Drawing. Artist Book 22 x 18 cm (closed) 76 x 18cm (fully open)

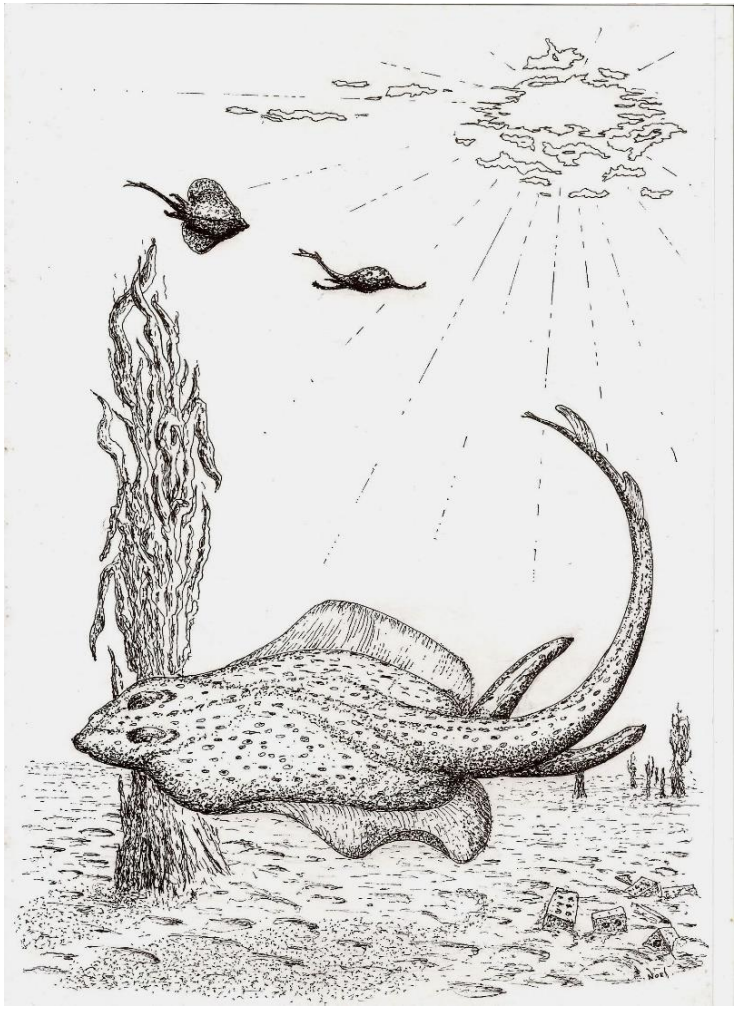
I found this wonderful description of rays in a second hand book - A History of the Earth and Animated Nature by Oliver Goldsmith, 1834. With the advent of publishing, curiosity about the natural world was beginning to be more accessible. One hundred and eighty years on, our focus turns to preserving these fragile environments!

Of Cartilaginous Flat-Fish or the Ray Kind

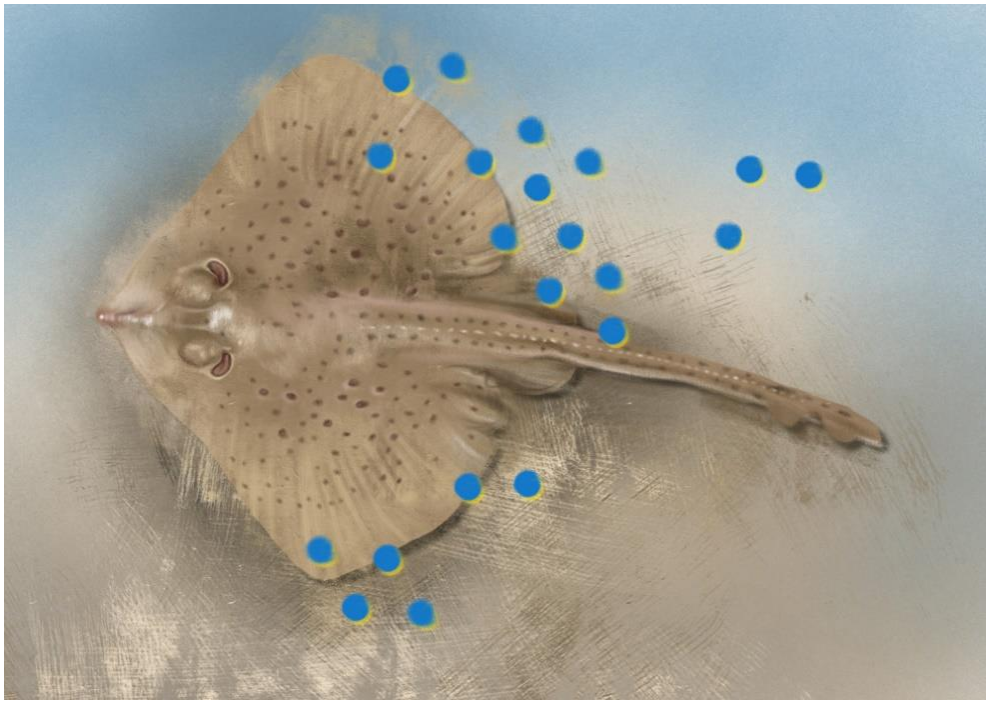
The same rapacity which impels the shark along the surface of the water, actuates the flat fish at the bottom. Less active and less formidable they creep in security along the bottom, seize everything that comes in their way; neither the hardest shells nor the sharpest spines give protection to the animals that bear them; their insatiable hunger is such that they devour all. The whole of this kind resemble each other very strongly in their figure; nor is it easy without experience to distinguish one from another. The stranger to this dangerous tribe may imagine he is only handling a skate when he is instantly struck numb by the torpedo; he may suppose he has caught a thornback till he is stung by the fire-flare (stingray). The skate and thornback are very good food and their size, which is from 10lbs to 200 weight, very well rewards the trouble for fishing for them.

But it sometimes happens that the lines are visited by intruders, by the rough ray, the fire-flare or the torpedo. To all these the fisherman have the most mortal antipathy; and when discovered, shudder at the sight.: however they are not always so much upon their guard that they sometimes feel the different resentments of this angry tribe: and instead of a prize they find they have caught a vindictive enemy. When such is the case they take care to throw them back into the sea with the swiftest expedition..."

Fish #035 Spotted Ray *Raja montagui* Noel Dunn Black 0.38mm fine-line felt tipped pen on white card 30mm x 21mm



The spotted ray can reach a length of 75 cm and a weight of around 4 kg. A short snouted ray with sharp disc corners forming approximately right angles. A median row of closely packed spines runs from the shoulders to the dorsal. The back is a brownish colour with small black dots that don't reach the margins of the disc and often a pale spot with a ring of dark spots forming an oculus on each wing. Breeding: Eggs are laid in shallow water from April to July. Habitat: Found in deeper water 25 to 120m over sandy and rough grounds. Food: Mainly eats a wide range of crustaceans, with only the occasional fish. Range: Common in the English Channel but less common in the North Sea. Numbers: No formal count has been undertaken but they are not considered at risk.



Fish #035 Spotted Ray *Raja montagui*
Bryony Loveridge
Digital Painting

The Spotted Ray has a diamond shaped body with a long tail, and small thorns running the length. Usually tan, light brown or cream in colour, dark brown or black spots fade towards the edges of its wings. Its diet mostly consists of crustaceans and prawns but it will also eat small flatfish. Fully grown they may also hunt small fish. While it can be found in rocky areas the Spotted Ray prefers a sandy seabed which enables it to bury itself to avoid predators and to ambush prey. Normally found in depths between 25 and 120 metres, in the coastal waters of the UK.

Spotted Ray

Lighting the depths with a dazzling display
The ray maker shines down on the ray
While soft earth cliffs are eroding away
It patrols the shallows out in the bay

Fish #035 Spotted Ray *Raja montagui*
Lorraine Auton
Acrylic on canvas board 42 x 60 cm

The spotted ray is a member of the family of rays and skates. It has a short concave, curved snout and a row of large spines which run down the centre of its back and tail. The young spotted ray has small spines on the upper surface near the front edge and in the adults these extend further back. The back is a sandy brown with dark spots which cease before the edge of the wings. It is creamy white on the underside. The spotted ray can often reach an adult length of 60 cm and an average weight of around 4 to 5 kg.

While it can be found in rocky areas, the spotted ray prefers a sandy/gravelly seabed in which it can partially bury itself when it is hunting for its prey. Adults are normally found in depths between 20 and 130 metres, whilst the young rays often keep to shallow inshore areas. Spotted rays are found from the coastal waters of the UK down to the Mediterranean. Population levels are stable and so its future is not a cause for concern.
The spotted ray feeds mainly on crabs, shrimps and other crustaceans. Its diet can also include small fish.

Spotted Ray 1

Turning, rolling, flat,
Then curling upwards to break
The surface. Sun light.

Haiku by Lorraine Auton

Spotted Ray 2

A tranquil glider
Drifts o'er rocks and seabed
With grace and beauty

Haiku by Tony Colledge

Fish #036 Round Ray *Rajella fyllae* Maris van Nijhuis Acrylic on canvas 60 x 30 cm

The Rajella fyllae is part of the Elasmobranchii family, or rays and sharks. The round ray comes in anything from ash gray to chocolate brown on its rough upper surface, outfitted with large thorns in irregular rows. It has lighter colors on its lower surface and has a maximum length of 60 cm. You can run into this ray in the Northeast Atlantic, from Spitsbergen to southern Norway, southern Greenland, Iceland, Faeroe Islands to Shetlands, the western coasts of the British Isles and Bay of Biscay. It prefers to swim in deep water and feeds on bottom animals. The round ray is harmless to humans and is of no interest for the fishing industry.

I selected this species first of all because I remember that when I was a young child my father was bitten by a sting ray, a different variety than the round ray here actually, which has its habitat in Southeast Asia. This made a big impression on me, as he was stung in his ankle and had a deep wound, which healed very slowly. Later in life, when I was traveling in the Caribbean, I managed to overcome my fear and swam in between large rays during a boat trip off the coast of Belize. For this painting I thought of the deep waters of the North Sea, and couldn't help but think of oil rigs, not the most environmentally friendly companions for fish. I included a young ray, since one of the most noteworthy facts I found about this species is that the young of the round ray tend to follow large objects.... such as their parents!

Fish #036 Round Ray *Rajella fyllae*
Matthew Fair
Watercolour and Ink on watercolour paper 30 x 30 cm

The first thing that struck me about the Round Ray was the depth at which it can be found - often around 2km below sea level. As a keen mountain climber, and to make sense of this, I tried to envisage this depth as a height above sea level. What helped me put it into context was the knowledge that the highest mountain in Britain - Ben Nevis - stands at 1,345m above sea level. The Round Ray's depth range works to the fish's advantage, offering it refuge from most fishing pressure. As a result, it is believed that the population of Round Rays is not under threat and is in fact steadily increasing.

The artwork seeks to convey this sense of depth with the dark colours representing the vastness of the ocean, combined with a seemingly distant light source, which of course is vital for the existence of all life. The Round Ray itself is painted in a light wash, depicting a white to light grey Ventral surface, typical of its species. The decision to paint the ray from below was not only driven by the desire to express the depth of the ocean but also the fact that the lightly coloured Ventral surface of the fish might contrast with the dark colours of the surrounding ocean and focus the eye on the subject of the painting.

Other key features of the Round Ray include a short snout, a distinctive rounded disc, and a long tail - typically longer than the body. The distinctive round disc obviously gives the ray its name and it came as somewhat of a surprise that this was such a distinctive feature on a ray, however, most species of ray have a more pointed, angular disc. There are few accessible images of Round Rays, therefore the description of its features have played a big role in the depiction of the fish in the painting.

Fish #037 Common Stingray *Dasyatis pastinaca* Bryony Dickens
Acrylic on paper 21 x 30 cm

Common Stingray

The stingray plays and preys
in the sand fanned wonderland
Ride the tide to glide,
wander yonder and ponder
Explore the seaweed to feed
and sweep along in the deep
Swim and skim
into the starless darkness.

The Common Stingray (*Dasyatis pastinaca*) is found in the north-east of the Atlantic and in the Mediterranean Sea and Black Sea. It lives in coastal waters preying on crustaceans, molluscs and small bottom dwelling fish. It is more active at night, often burying itself in sediment during the day. They are caught as a by-catch by trawlers, but although their livers are used for liver oil, and the livers can be considered a delicacy, their flesh is of limited value. They typically measure about 45cm across with a whip-like tail 35cm long, although significantly larger specimens have been recorded. The serrated stinging spine is part way along the length of the tail which has a gland of venom. The spine is shed and replaced periodically. Females bear 4-9 young twice per year. The embryos feed on the yolk and as they develop their mother provides histotroph ('uterine milk'). The 'pups' measure about 8cm across when they are born and can live into their twenties.

I chose one of the many species of stingray because we were married on the 3rd September 2006 and I later found out that Steve Irwin had been killed the following day by a stingray. The transition from delight to tragedy is always a reminder that nature can confound us however much we believe we understand it.

Fish #038 Common Skate,D*ipturus batis* Jane Rushby

Crochet

I'd love to be able to tell you that I chose this fish because it was my father in law's favourite to eat, and as it happens he died during the period I was crocheting; indeed, I spent many hours crocheting at his home and in the hospice while my husband and mother in law cared for him in his last days and hours. However, the honest truth is that it was one of the few available fish I had actually heard of, and I liked its spots!
As it happens, research published fairly recently (2009 and 2010) shows that the species *Dipturus batis* is actually two separate fish, the smaller southern *flossada* (blue skate) and the larger northern *intermedius* (flapper skate). The large fish is the largest skate in the world, reaching a length of over 9 feet.

At the beginning of the C20 the fish was plentiful in the waters around the British Isles, where it was predominantly found at depths of 100-200m, as a bottom dwelling species, although it can occur as shallow as 30m and as deep as 1000m, such as along the edge of the continental shelf. It was reported by the Guardian in 2002 that the common skate is 'commercially extinct' however the thrust of the concern seemed to focus on the implications of this for stocks of other fish more popular for the table such as cod, herring and whiting which are also depleted owing to unsustainable fishing practices. The species was noted as 'critically endangered' in 2006 and its previous abundance in the northeast Atlantic and Mediterranean sea has been severely compromised and depleted.

The skate can live for 50-100 years, when they reach maturity they mate in the spring and females lay approximately 40 egg cases in sandy or muddy flats and the eggs develop for 2-5 months before hatching. When hatched, juveniles measure up to 9 inches long, so it seems I have inadvertently crocheted a baby skate!

The common skate is a bottom feeder, its diet includes crustaceans, clams, oysters, snails, and small to medium-sized fish, including other skates! Some skates ascend the sea to feed on mackerel or herring. The skate could at first glance be rather a boring grey fish, however, on closer examination it features a range of blotches, spines, thorns and spots. I've employed artistic licence clearly, when depicting my baby skate, as well as in my interpretation of the North Sea.

Fish #038 Common Skate Dipturus batis Amanda M Whispell

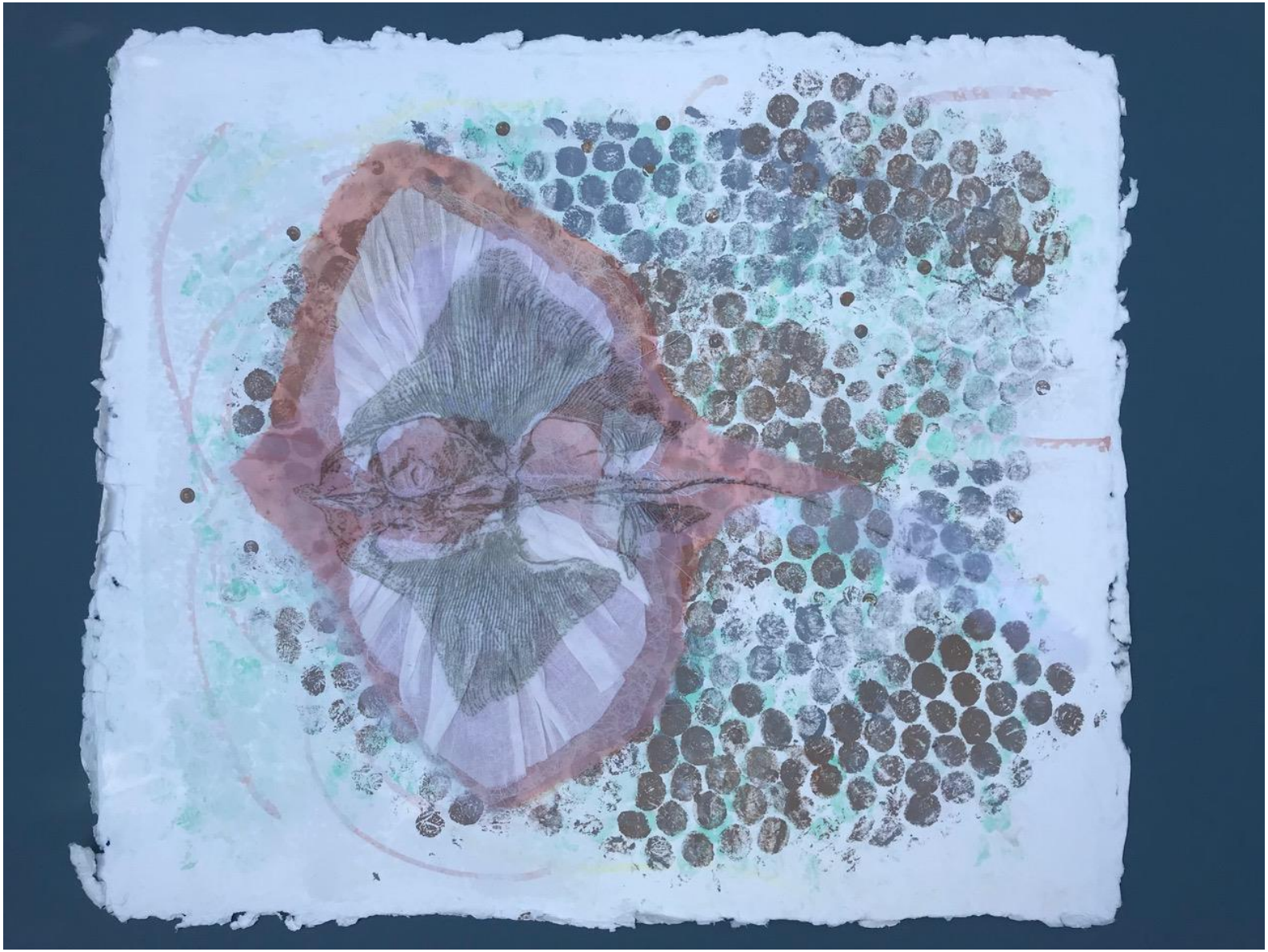
Dipturus batis (Linnaeus, 1756) Common names: Common Skate, Blue Skate, Flapper Skate, Grey Skate
Chordata: Chondrichthyes: *Rajiformes: Fajidae*

Dipturus batis is the largest skate in the world, attaining lengths of up to 2.85 m (Stehmann 1990), with a range that covers much of the continental shelf of the Northeast Atlantic. It is found in benthic habitats of both shallow and deep waters where it primarily preys on crustaceans and teleost fish (Muus & Nielsen 1999). It has oviparous reproduction, producing large egg cases, which they deposit in the Mediterranean and Northeast Atlantic in the spring and summer (Clark 1922; Wheeler 1969).

Historically, *D. batis* was one of the most abundant skates in the North Atlantic (Froese 2017), but it is now considered scarce throughout much of its range (Stehmann & Bürkel 1984). It was first listed as Endangered by the International Union for Conservation of Nature (IUCN) in 2000 and has been listed as Critically Endangered on the IUCN Red List since 2006 (Dulvy et al. 2018). *D. batis* is now considered extirpated from the Adriatic Sea (Tintl et al. 2003), the Irish Sea (Brander 1981), the English Channel (Walker 1999), and the Central North Sea (Rogers & Ellis 2000). The greatest threat for *D. batis* populations comes from the commercial fishing industry (Dulvy et al. 2018). Individuals are taken as intentional and unintentional catch by commercial fisheries, as it is often landed as both a targeted species and as bycatch throughout its range (Dulvy et al. 2018). In 2016 ICES has assessed *D. batis* as depleted and listed the current allowable catch at zero. The common skate is now protected within the European Union, making it illegal for commercial fishers to actively target the species or keep individuals that are accidentally landed as bycatch (ICES 2016)

Brander K. 1981. Disappearance of Common skate Raia batis from Irish Sea. Nature 290: 48-49.
Clark RS. 1922. Skates and rays (Raiae) No.1. Egg capsules and young. Journal of the Marine Biological Association of the United Kingdom 12: 577-643.
Dulvy NK, Notarbartolo di Sciara G, Serena F, Tinti F, Ungaro N, Mancusi C, Ellis J. 2006. Dipturus batis. The IUCN Red List of Threatened Species 2006: e.T39397A10198950. http://dx.doi.org/10.2305/IUCN.UK.2006.RLTS.T39397A10198950.en. Downloaded on 24 July 2018.
Froese R, Pauly D, eds. 2017. "Dipturus batis" in FishBase. January 2017 version.
ICES (11 October 2016)5.3.12 Common skate (Dipturus batis-complex (blue skate (Dipturus batis) and flapper skate (Dipturus cf. intermedia)) in subareas 6â€“7 (excluding Division 7.d) (Celtic Seas and western English Channel). ICES Advice 2016, Book 5.
Muus BJ, Nielsen JG. 1999. Sea fish. Scandinavian Fishing Year Book, Hedehusene, Denmark. 340 p.
Rogers SI, Ellis JR. 2000. Changes in the demersal fish assemblages of British coastal waters during the 20th century. ICES Journal of Marine Science 57: 866-881.
Stehmann M, Bürkel DL. 1984. Rajidae. In: PJP Whitehead, ML Bauchot, JC Hureau, J Nielsen & E Tortonese (eds) Fishes of the North-eastern Atlantic and Mediterranean. Vol. 1. pp: 163-196. UNESCO, Paris.
Stehmann M, 1990. Rajidae. p. 29-50. In JC Quero, JC Hureau, C Karrer, A Post and L Saldanha (eds.) Check-list of the fishes of the eastern tropical Atlantic. Junta Nacional de Investigaçao Cientifica e Tecnológica, Lisbon, Portugal. Vol. 1.
Tinti F, Ungaro N, Pasolini P, De Panfilis M, Garoia F, Guarniero I, Sabelli B, Marano G, Piccinetti C. 2003. Development of molecular and morphological markers to improve species-specific monitoring and systematics of Northeast Atlantic and Mediterranean skates (Rajiformes). Journal of Experimental Marine Biology and Ecology288: 149-165.
Walker PA. 1999. Fleeting images: Dynamics of North Sea ray populations. University of Amsterdam, Amsterdam.
Wheeler A. 1969. The fishes of the British Isles and North-west Europe. Macmillan, London.

Fish #041 Longnose Skate, *Dipturus oxyrinchus*, Harriott Brand



The Long Nosed Skate, Raja Oxyrinhus, is commonly found on the floor of the sea at depths between 25 and 675 metres. As a bottom dweller it is often observed partially or entirely buried in the sand and silt with just its eyes protruding above the surface. The colouration of this skate is used to camouflage it with the bottom substrate.

To move, the Long Nosed Skate undulates the pectoral fins in a graceful sweeping motion appearing to fly rather than swim through the water. This fascinated me as a child and a good bath enabled me to emulate its diagonal shape and swimming motion with a flannel!

The maximum reported size is 140cms though the average is around 60-90 cms with the males being smaller than the females. Life span unknown but thought to be around 6 to 9 years. They eat small fish and invertebrates, including crustaceans, worms and molluscs. They pounce on top of their prey, trapping it against the sea floor.

Skates lay eggs which grow as tough permeable cases; we know them as Mermaids purses and they are often found on the tide line in the seaweed. All my life I have loved finding them on the beach and with such a magical name.

My fish uses digital printing of its internal bones, machine and hand stitching on pastel hues of textiles for the wings and skin. The water current movement ripples are printed using bubblewrap on a handmade paper.

Fish #042 Pelagic Stingray
Pteroplatytrygon violacea
W Flemming
Digital drawing

This mysterious creature, which was recorded for the first time in 1832 from the east coast of India, is believed to be a real cosmopolitan. Observed throughout tropical and subtropical areas of the Pacific, Atlantic and Indian Oceans, from the Galapagos Islands to The North Sea, it is very rarely encountered by humans - unlike most of its closest relatives, Whiptail Stingrays. Being the sole member of its genus, it even swims differently - gliding through water in a mesmerizing slow undulating motion, which reminds more of giant Eagle Rays. However, with its most common size of about 60 cm it is hardly gigantic.

So why is this stingray so special? The key is in its common name - Pelagic - which means "of or relating to the open sea". It is the only member of the family that lives in open ocean, rather than cosying in sandy bottom shallow waters. An active hunter, it feeds on free-swimming invertebrates, as well as small fishes such as herring and mackerel. After spending the winter season in the warmth of oceanic waters near the equator, it loves to take advantage of seasonal feeding of octopus, shrimp and squid while it migrates off the equator towards the North or the South for the summer, closer to the coast. The ocean world is truly its oyster!

Its world is also full of danger, mostly coming from its cousin, the oceanic whitetip shark or from longline fisheries around the world. It is caught frequently by tuna and swordfish longliners and mostly, sometimes even brutally, discarded as bycatch. That is why about ten years ago pelagic stingray was added to the "red list" of threatened species maintained by the World Conservation Union. Luckily, due to apparent lack of population declines, reported since the 1950s, coupled with its wide distribution and high reproductive rate, it is listed as "Least Concern" at the moment. Hopefully the future generations will still have opportunities to observe and admire this gracefully shy free-roamer of the ocean - and The North Sea.

Fish #043 Common Eagle Ray *Myliobatis aquila* Mary Olsen
Oil 40 x 50 cm

Eagle Ray

Eagle Ray Big and Bright,
Swimming in the ocean Light,
Soaring through the ocean Deep,
Looking for food to eat,
Sweeping down to the floor,
Looking for That Something more.
Freedom is what they acted on.
Now they are almost gone.

Fish #044 European Sea Sturgeon *Acipenser sturio* Alan Durtschi
Coloured pencil and ink 36 x 43 cm

Fish #044 European Sea Sturgeon *Acipenser sturio* Laura Bateman

Watercolour and pen with silver leaf 35 x 40 cm

The European Sea Sturgeon, *Acipenser Sturio*, is the rarest of all sturgeons and always has been despite having the alias of the Common Sturgeon; unfortunately in 1996 it was listed as critically endangered. At present the WWF suspect that there is one single wild population that exists in the Garonne and Dordogne rivers in France. It is estimated that less than 750 individuals remain today. Previously the European Sturgeon could be found in the Atlantic, English Channel, Mediterranean, the Black Sea and the North Sea amongst others. European Sturgeons ascend rivers between January and October each year to spawn from June to July, at other times of the year they stay in estuaries and in coastal waters mostly staying at 20-50 metres below surface.

Sturgeons are large fish, and this species can reach up to 6 metres in length and weigh up to 400kg, however the average length is more like 1.25 metres. They can live for up to 100 years; slow development means that they don't reach sexual maturity until their mid to late teens, so breeding age starts from 12-14 years in males and 16-18 years in females. They dine predominantly on molluscs and crustaceans that they find using the sensitive barbels on their lower jaw. They have three lines of bone plates running the length of their body, which acts as a defensive tool against predators. During the early 19th century the European Sea Sturgeon was fished extensively for its caviar - poachers would catch hauls 10 times the legal catch in order to harvest caviar This, coupled with their late sexual maturity is what unfortunately lead to its decline and now its status as critically endangered. In 1982 the European Sea Sturgeon was made a protected species and so it is no longer fished for caviar, other Sturgeon species however still are.

Alongside over fishing and poaching, other threats to the Sturgeon include water pollution (especially affecting spawning grounds), damming and destruction of natural watercourses and habitats, including gravel extraction in the Garonne. It is estimated that numbers have declined by 70% over the last century. Whilst the European Sea Sturgeon is one of two species that are critically endangered, all other Sturgeon species are affected by these factors, with wildlife trade posing a particular threat in the harvesting of caviar.

There are breeding programmes in captivity for restocking, but these are yet to breed in the wild as there are indications that females only breed every 3-4 year, and males every 2 years. The National Fishermen Association in Atlantic North Sea and the WWF have coordinated a fisheries awareness programme. Overfishing and water pollution is something that we have been made very aware of in the media in recent years. With caviar not being something that most of us eat on a regular occasion I was sadly unaware of the issues associated with the overfishing of these lovely creatures for their eggs. I try so carefully to eat fish that are being responsibly fished, but it says something about the human race that a species has been fished to the point of critical endangerment for a 'delicacy'

Painting and researching the European Sea Sturgeon has given me and insight into a side of the fishing industry that I was previously unaware of. In general this project has made me more passionate about protecting our oceans and all that live in them, whilst I may not eat caviar (I think I may have tried it twice in my lifetime) I am grateful to have been made aware of the impact on the all Sturgeon populations. Water pollution is something we are all aware of, especially that of plastic, I feel strongly that if we all do our part, small as it may be, we can make a difference - reusing containers, recycling whatever possible, and reducing the amount of new plastics that we buy. Changes will take time but our planet and its creatures are worth it. Stumbling across this project has given me the opportunity to research something I otherwise wouldn't have, it's added to my growing passion to help save our oceans, getting involved has given me so much more than just the opportunity to paint a fish...

Fish #045 Euoropean Erl *Anguilla anguilla* Keith Norman
Hard pastel and watercolour 42 x 59 cm

European Eel

Anguilla Anguilla. So good they named you twice
Serpent of river and sea and jellied for Pearly Kings and Queens
I caught you in a local stream
A length of 2x2 into the weed and drag you up the bank
As you slithered back to water refuge you were caught and sold for smoking
Half a Crown was your worth, if a decent size
Always mysterious in your life cycle
Starting in the sea, life in fresh inland or brackish coastal water and returning to the ocean to spawn and die
You once lived to a century or more and grow to enormous length.
But not now.
You've made the critically endangered list and too few grow to adolescence.
Since the 70s a decline of 95% with parasites, overfishing and barriers to migration blamed
Breeding projects tried to simulate your ocean phase but you're not fooled by artificial currents, hormones and special diets.
Snake like, slimy Eel you lack the glamour of other fishy friends
I repent the mistakes of youth and hope you once again bring the mystery of the Saragossa to our British shores.

Fish #045 Euoropean Eel *Anguilla anguilla* James Cassidy

Like England's true Wyrm is the Eel.
I saw one swim up our beck, thirty miles from the coast,
Fleeing Eden, or it's billion elvers.
I froze at it sliding past.

Fish #046 Eoropean Conger *Conger conger*
Carey Jones
Acrylic on canvas 20 x 20 cm

Found in the English Channel, North Sea, Irish Sea, French Coast and Mediterranean. Conger Eels are not to be messed with! A massive conger eel was caught in 2015 off the British coast - it was taller than a double-decker bus and weighed a whopping 59kg. This is disconcerting enough but add to this the fact that they are predators that will attack humans and they start to become the stuff of nightmares. For instance, in July 2013, a diver was attacked by a conger eel off Ireland at a depth of 25 metres (82 ft). The eel bit a large chunk from his face and the diver reported that the creature was more than 6 feet (1.8 m) in length and "about the width of a human thigh". Blimey!

Despite the above we still persist in fishing for them and have been since the 12th Century - the Norman taxation Pipe Roll recorded two 'éperquerie' in the Channel Islands which were designated places where conger eels were dried. Another claim to fame for the Conger is that it is one of the few fish that can swim backwards and is famous (or infamous) for living in ship-wrecks or eel pits which they often share with Moray Eels, as in this painting, from which they dart out and ambush smaller species such as fish, cuttlefish and squid.

Until recently it was thought that the Conger headed to the Sargasso Sea to breed but this is now in doubt with the view that they may actually only breed once, possibly in the very deep water off the UK coast, but it still remains somewhat of a mystery.

Fish #047 Slender Snipe Eel *Nemichthys scolopaceus* Frances Clayton
Watercolour, gouache and acrylic ink. 38 x 28 cm.

A Deep Sea Predator

Scientific name: *Nemichthys scolopaceus*
Size: up to 1.5m (5ft). Weighs less than 100g (3.5 oz).
Habitat: from the surface to thousands of meters.
Eats: shrimps, using its long bird like beak to sweep through the water to catch them.
Reproduction: broadcast spawning. It is believed to spawn just once and then die.
Lifespan: 10 years
Interesting facts: has more vertebrae than any other species - up to 750. its anus is on its throat.

Fish #049 Twait Shad *Alosa fallax* Lyn Lovitt
Oil pastels and coloured pencils - 76 x 55 cm

Fish #050 Atlantic Herring *Clupea harengus*

Jeanette Killner

Recycled aluminium cans 23 x 23 cm

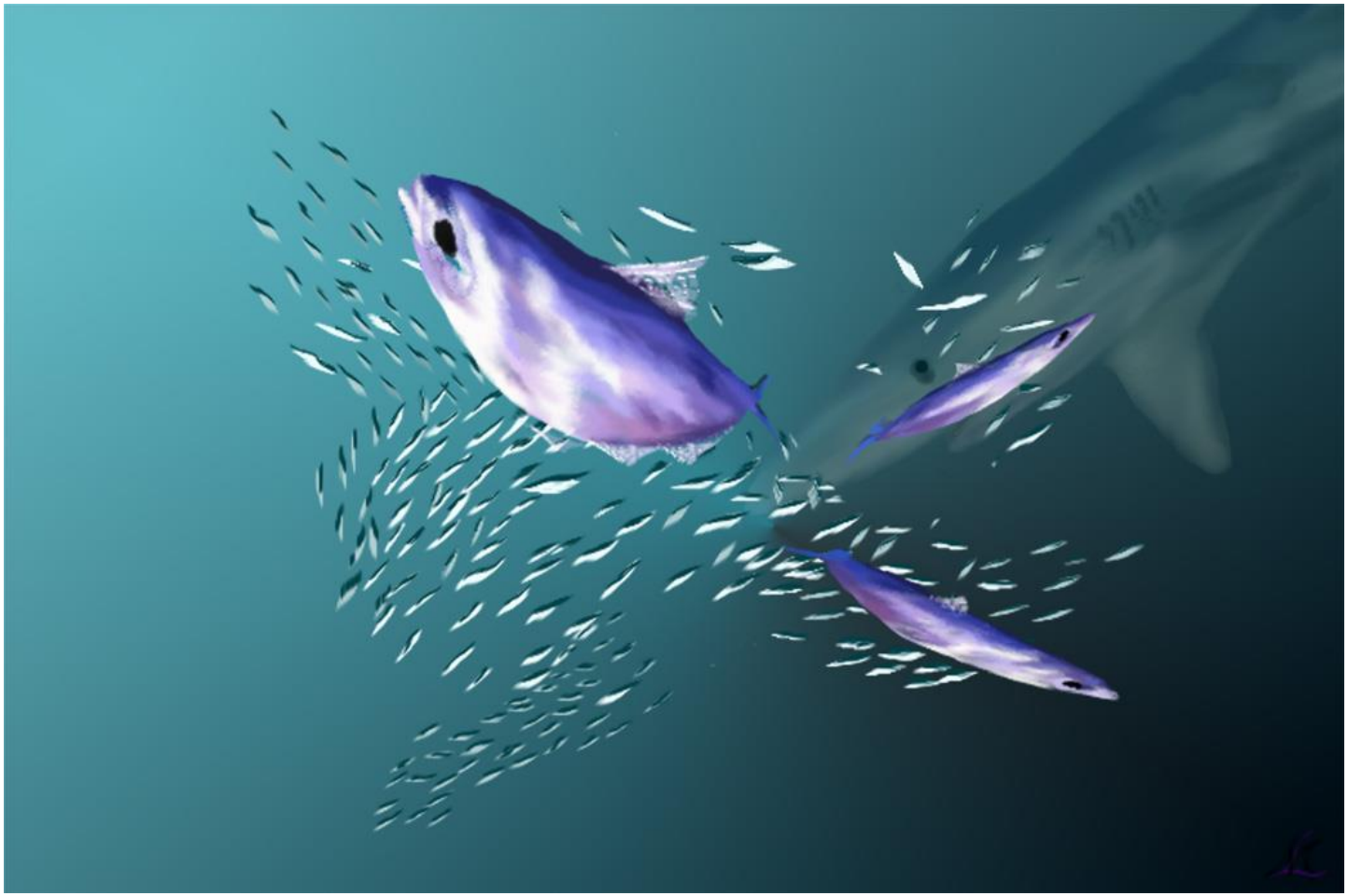
When I first looked at the list of 200 fish, my intention was to select the most exotic and flamboyant one available. However, as I looked, the song 'Shoals of Herring' by Ewan MacColl kept coming into my head, and I started to think about, and research, the Atlantic herring instead.

Herring live in large shoals, and are one of the most sought-after food sources in the sea. One of their strategies to avoid predators is to stay in deep water during the day, swimming to the surface at night to feed on their main diet of zooplankton. However, they are still herded and eaten in huge numbers by dolphins, whales and dogfish, as well as being attacked from above by seabirds. Herring have also been over-fished by man, using large trawl nets, but with conservation measures put in place stocks in the North Sea are now considered 'sustainable'.

Growing up in the 1950s and '60s canned sild (tiny herrings canned in Norway) were my preferred alternative to sardines, and Shippam's bloater (whole smoked herring) fish paste was my favourite flavour. Kippers and herring roes were, and still are, occasional treats. In fact, when they are in season, soft herring roes dusted in seasoned flour, sautéed in butter, and served on toast, is one of my favourite meals. In her book 'Good Things' food writer Jane Grigson's recipe for kipper quiche is a delicious dish. Although not to my taste, I remember my granddad eating soused herrings, and as an art student in the early 1970s, with the growing interest in Scandinavian design, rollmops were a 'trendy' snack.

The herring industry has had a huge impact on people's lives, both culturally and economically, but more important is the herring's role in the marine food chain. It is, perhaps, the 'iconic' fish of the North Sea, so instead of selecting the most visually interesting fish on the list, I ended up trying to represent the simple, but indispensable, herring.

Fish #051 European Anchovy *Engraulis encrasicolus* Mark Loosemore
Digital Art



An Anchovy's Tail

Every member of the shoal
Unless the shoal has fled
Remembers to stick close behind
One which the shoal has led.
Perhaps the way across the sea
Easily can be found
And anchovies of every size
Need to search around.

A fish as small as this must be
No slower than the rest,
Cause anchovies are perfect prey
How can he keep abreast
Of those who swim so fast.
Very many started out and some will not survive
Yet Anchovies who pass the test are glad to be alive.

Commonly this fish attains a length of little more than 14 centimetres. It is mainly a coastal marine species, forming large schools. The reaction of anchovies to predators is intense. A school that may be spread over several hundred metres contracts at the approach of a predator to a moving, writhing sphere of thousands of fishes only a few metres across. In such a situation the predator cannot concentrate on a single individual and may be frustrated in its attempt to catch any fish. Anchovies tend to move further north and into surface waters in summer, retreating and descending in winter. Those unfortunate not to retreat quickly enough and caught by fishing fleets are likely to be marketed fresh, dried, smoked, canned, frozen or made into fish meal.

Fish #052 European Pilchard, *Sardina pilchardus*, Kate Sell

Glass mosaic 16 x 24 cm

Common names: European pilchard, Fair Maid, Pilchard, Sardine, Soused Pilchards, True Sardine, Cornish Sardine.

It is a small silvery shoaling fish found throughout Europe, particularly in the warmer waters of the Mediterranean and Adriatic seas, although it is also found around Britain and the colder waters of Scandinavian countries and Iceland. Varying in length between 15-20cm European pilchards are thought to live up to five years, close to shore and feed on small planktonic crustaceans. European pilchards are themselves a major source of food for all types of predatory fish and humans! They are also used as a commercial fishing bait on long-lines. However with this in mind, this species is classed as Least Concern by the IUCN (International Union for the Conservation of Nature).

They are a highly nutritious oily fish and are perfect when fresh, grilled on the barbecue with olive oil, lemon and salt or served with a rich tomato sauce.

A traditional dish in Cornwall is the Stargazy Pie, so called because the pilchard heads are protruding out of the top pastry layer, looking as though they are gazing skyward. I'm sure it is delicious as I understand that the oils from the fish flow back into the pie during cooking but I am afraid I cannot cope with a fish looking up at me from the plate!

I found it interesting to read that there is a game called Sardines, a variation of Hide-and-seek that I played as a child. Rather than one person counting and the others hiding as in hide-and-seek, one person hides and when the others find the hidden person they hide in that space too until there is one person left who then becomes the one to hide on the next game! This relates to the popular English phrase 'packed like sardines' used where people or objects are crowded closely together in a small space refers to tinned or canned sardines.

Fish #053 European Sprat *Sprattus sprattus* Howard Yeomans
Ink and card collage 30 x 28 cm

Plata Passant

My mother was a Sprat,
My dad was one anawl.
I took both their names
To keep me individual.

I mostly spend my days
Going with the crowd.
Been a long while driftin'.
We're looking like a cloud.

Soon a ship will come along.
All futures marked by fate.
Net, freezer, factory door,
Tomato sauce, Great White plate.

Sprattus is a genus of small oily fish of the family *Clupeidae*, which also includes herrings and pilchards. There are five species in the genus, all of which have a similar innocuous silvery appearance. Well-known for being a bit on the small size, the sprat grows up to about 15 cm / 6" in length, making it ideal for packing in food tins and just the right size for a snack, perhaps on toast. Widely consumed across northern Europe, the European sprat - also known as bristling, brisling or skipper in its younger days - is indeed an important food source for some.

Living in cooler waters, the sprat thrives around Great Britain, Scandinavia and in the Baltic sea, where it is to be found in large shoals, making them an easy catch once located. Sprat feed on tiny fish larvae and plankton and are themselves a major part of the marine food chain, given they are eaten by virtually all predatory fish. The sprat is also an important source of food for marine birds such as gannets and herring gulls.

Fish #054 Greater *Argentine Argentina silus* Deborah Neville
Collage on watercolour paper 30 x 21 cm

‘Let's Tango’

It has a pointed nose, deeply forked tail, and slender, compressed body, but it has much larger eyes than either smelt or capelin, a character no doubt associated with its deep-water home; its mouth is much smaller, not gaping back even as far as the eye; and its dorsal fin stands wholly in front of the ventrals, instead of above them as it does in both the smelt and the capelin. It is thought to swim in schools close to the seabed. It feeds on small fish and planktonic invertebrates, including squids and amphipods. It spawns from April to July. Growth is slow. It is used fresh or in fish meal production. It is considered to be underutilized.

Etymology: Argentina: Latin, *argentus* = silver
Environment: Depth range 140-1440m, usually 150-550m. Deep-water; 80°N-42°N, 71°W-31°E.
Distribution: Eastern Atlantic: Svalbard to west coasts of Scotland and Ireland deeper parts of North Sea and across the Wayville Thomson ridge to Denmark Strait. Western Atlantic: Davis Strait to George's Bank in Canada. Arctic Ocean: east to Finnmark, Norway, Barents Sea.

I am so excited about this exhibition because the state of the Oceans is very dear to my heart.

"With every drop of water you drink, every breath you take, you're connected to the sea. No matter where on Earth you live. Most of the oxygen in the atmosphere is generated by the sea." - Dr. Sylvia Earle

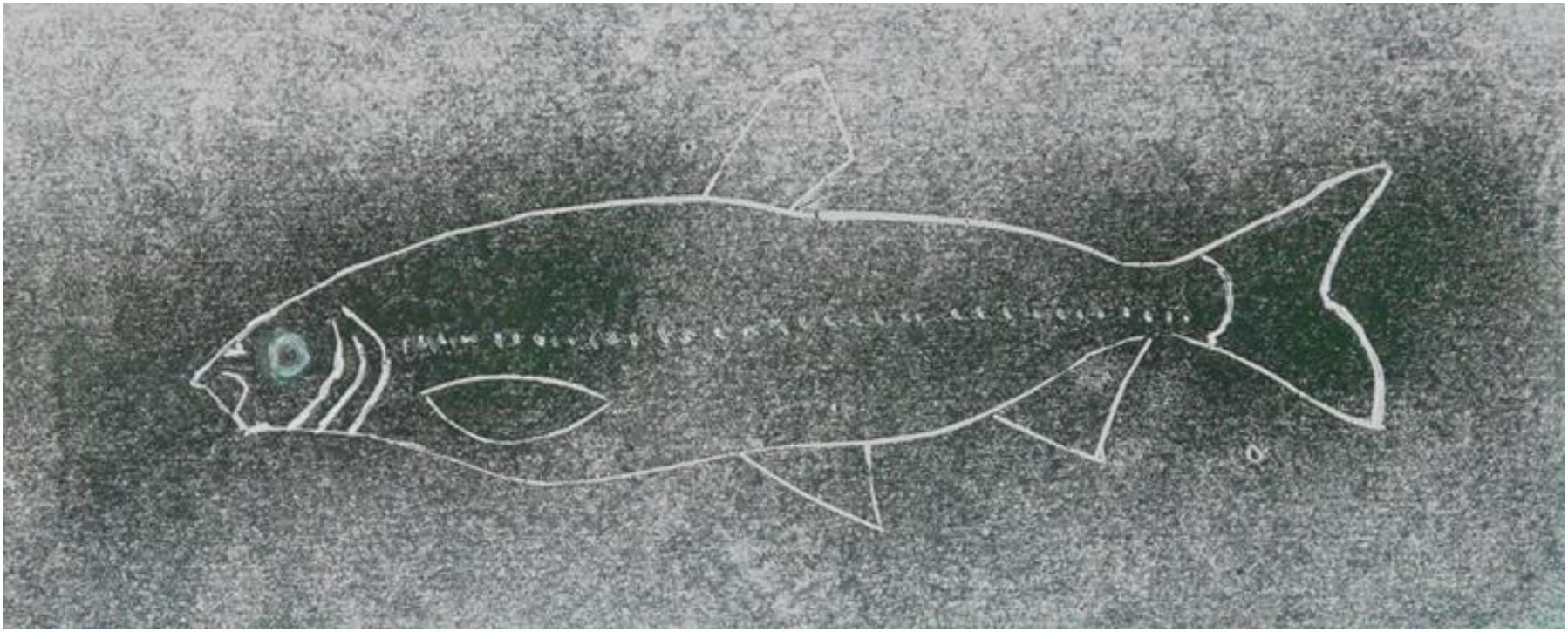
Fish #055 Argentine *Argentina sphyraena* Cat Howard Oil on board 37 x 57 cm

The *Argentina sphyraena* are a part of the herring smelts family of fish. They are tiny fishes only growing to about 25cm long. They live in large schools deep in the Easter Atlantic waters. Living close to the ocean floor they survive by eating plankton. They have a minor commercial use and are rarely used in fisheries or consumed by humans. Intriguingly, they are meant to smell like cucumbers.

Fish #055 Argentine, *Argentina sphyraena*, Caroline Allison
Watercolour 18 x 25 cm

The argentine (Latin origin: *argentus* = silver), also known as the silver smelt or silverfish, can be found in the eastern Atlantic where it is in abundance from northern Norway to western Sahara including southern Iceland, Faroe Islands, Shetlands and the Mediterranean Sea. They like to eat bristle worms (polychaete), molluscs and crustaceans, invertebrates and fish that are pelagic (i.e. those that live neither at the surface nor the bottom of the ocean). At the moment the conservation status of the species is not endangered, and is considered of least concern (let's hope it stays that way!) and can usually only be found in Mediterranean seafood markets. The silver pigment from their scales is used to produce 'pearl essence' used in the manufacture of artificial pearls. Due to this fish being slightly obscure, there is little to reference in terms of literature and artwork. The fish's appearance, I think, is almost comical. Its large eyes and rainbow sheen create the illusion of a cartoon character, which shows us how utterly ignorant we are when it comes to the ocean's hidden treasures - from cartoonish visions to eerie glowing shadows, the ocean truly is a slumbering universe waiting to be awoken by explorers. Overall, hopefully you now have a basic understanding of this cute and tiny little fish to which I have managed to become quite attached.

Fish #056 Houting *Coregonus oxyrinchus* Jean Vernon
Linocut monoprint



Depending on how one defines the species, *Coregonus oxyrinchus* may or may not be extinct.

In the last Ice Age much of Britain, northern Europe and the North Sea between, was covered in ice. No fish could swim. As the ice retreated the fish followed. The genus *Coregonus* are a group of 'whitefish', some of which are entirely freshwater and lived out the Ice Age in southern and central European lakes and rivers and some are, like their relative, salmon, anadromous, living their adult lives at sea but swimming up rivers to breed in freshwater. Over the last 10000 years some populations of *Coregonus* have become separated from others and have evolved sufficiently to be regarded as separate species. Just when a population is classified as a species is sometimes a matter for dispute amongst taxonomists. *Coregonus lavaretus* is regarded as a 'complex', a group of species, subspecies, and populations whose taxonomic boundaries are difficult to define. The North Sea Houting, *C. oxyrinchus*, is a population that is particularly well adapted to spending its adult life in a truly marine environment of ocean salinity, rather than the brackish waters of river estuaries, the low salinity of the Baltic and freshwater rivers and lakes. Houting does retain the anadromous habit of breeding in rivers.

In the 19th century it was a common enough fish to make a commercial fishery off Britain's North Sea coasts and was regularly found on the London fish markets. But by 1940, the English, Belgian and Dutch populations were extinct, victims of overfishing, river pollution and river barrier construction. The Danish houting survived but there is controversy whether this population should be classed as a separate species. Whatever the taxonomic status, a programme of reintroduction (or introduction) of Danish houting to Dutch waters has recently been undertaking with some €13 million funding from the EU to establish a breeding programme and reduce pollution and remove river obstruction.

Freshwater relatives of the houting, the Shelly, Powan, Pollan, Gwyniad and Vendace are found in some British and Irish lakes. The Vendace is probably Britain's rarest fish, the only natural population being in Derwent Water and, possibly, in Bassenthwaite. All the *Coregonus* fish require unpolluted, highly oxygenated and cold water. They breed in the winter when temperatures are below about 6°C. Climate change is a threat to these relic Arctic populations as their lakes become warmer and subject to eutrophication. Members of the *Coregonus* genus are likely to be among the first of our fish species to become extinct because of global warming.

Fish #057 Atlantic Salmon *Salmo sala*
Barbara Eger
watercolour and ink

The Atlantic Salmon are truly magnificent fish that can be found in a number of locations, including Europe, North America and the British Isles.

Their colour varies from bluish/green to silvery with some black spots, to a darker mottled appearance with red or black patches. The average length is around 70-75cm, weighing between 3.6 to 5.4kg.
The habitat of the Atlantic salmon is the river, where they are born and spend most of their young lives, before going out to sea. They undergo significant adaptations in order to adjust from freshwater to seawater habitat, where they feed and grow to finally return via sea surface currents to their natal river to spawn. During this time they face predation from humans, seals and larger fish. Survival rate to this stage is estimated between 14-53%. Some fish will repeat the migration and spawning pattern several times, although this is rare.

Atlantic Salmon were once abundant throughout the North Atlantic, but populations have declined dramatically mainly due to human activities such as overfishing and habitat change. Competitive farmed fish pose further threats to wild salmon, giving rise to problems associated with interbreeding resulting in reduced viability and character of the native species.

International conservation efforts are underway with reported slow progress, in an effort to save the wild species of *Salmo salar*.

Recommended reading:
"Atlantic Salmon is Basically Extinct: You are eating a Genetically Eroded Version". By Kathleen McKeoghain March 2014/ Source AlterNet. An excellent summary of Scientific Literature on native Atlantic salmon.

Fish #057 Atlantic Salmon *Salmo salar* Mali Boyce
Acrylic on Paper 34 x 29 cm

The natural breeding grounds of Atlantic salmon are rivers in Europe and the eastern coast of North America and unsurprisingly there is a great deal of folklore from these countries about this beautiful fish, from Celtic, Norwegian and Native American stories, myths and legends, to Pictish stone carvings such as the stone in the Manse Garden at Glamis, Angus, which dates from the 7th century, and the novel Salar the Salmon by Henry Williamson. The Salmon is regarded as brave and wise, possessing determination and strength and it is believed that dreams about salmon show that person overcoming adversity and achieving success, which reflect the salmon's life cycle.

Fish #58 Brown Trout *Salmo trutta* Karen Hoyle
Painted Silk

Fish #058 Brown Trout *Salmo trutta* Barbara Eger
Oil on board

Migrants losing ground

The brown trout is a European species of salmonid fish that includes purely fresh water populations, as well as the sea trout. The latter migrates to the ocean and returns to the river to spawn.

The brown trout is a medium sized fish and can live up to 20 years, but a high percentage doesn't recover from the spawning and subsequently die.

The trout can be found around the world and is not considered endangered. However, individual stocks are threatened by environmental pollution, overfishing and rising water temperatures.

Fish #059 Arctic Char *Salvelinus alpinus* Lee Conybeare
Oil on canvas 30 x 49 cm

The name 'Char' is thought to derive from the Gaelic name for the fish which means red belly. As its name suggests the Arctic char is a cold water fish. It is a close relative of salmon & brown trout. There are two types of Arctic char. One form inhabits deep lakes in central northern Europe, including many lochs in Scotland, where they found themselves landlocked in northern lakes and fresh water lochs during the ice age.

The other form is migratory, commonly found in the most northerly reaches of Europe. They breed in rivers & spend their winters in the sea. Each have their own distinctive characteristics depending on their environment and the time of year. Generally the landlocked char are green/brown in colour with red and white spots on their sides. They are rarely exceed 30cm/12" long. Migratory char are silvery with red/orange bellies and can grow up to 1m/3ft. In both forms they have small scales, with the base of the tail being quite narrow. The caudal fin is large and there is a small adipose fin. Both forms have white edges to the pectoral, pelvic and anal fins. Arctic char spawn between September and November mostly in tributary streams of their river homes and feed on aquatic invertebrates and small fish.

It is relatively rare to find Arctic Char on a menu although farming of this species is becoming more widespread in Iceland and other areas of Northern Europe due to their similarity to salmon and trout. Currently Arctic Char are not under great threat but where populations have been lost, it has been due to factors such as acidification & temperature change.

Recently the Arctic char has featured in public art; a handmade steel sculpture by Brian Fell and his son George depicting a shoal of Arctic Char is one of the latest installations to take its place for the 2018 Lakes Ignite Festival to celebrate the Lake District national park becoming a world heritage site. 'The Arctic Char is one of the Lake District's most notable examples of wildlife. The fish's presence in the lakes dates back to the Ice Age and its survival there is an inspiring example of conservation.' The West Morland Gazette

The Arctic Char appealed to me because no other freshwater fish is found as far north and I always seem to be drawn to things from the icy north!

Fish #060 European Smelt *Osmerus eperlanus* Rebecca Groom
'A Shoal of Smelt' Soft Sculpture 100 x 45 cm

Eighteen "soft sculpture" European Smelt woven through a piece of discarded fishing net. The Smelt were digitally painted and sewn by the artist, their sizes are within the known range for adults of this species. Each of the Smelt is scented like cucumber and can be removed from the net to be handled and examined.

The European Smelt is a species of fish native to the coastal waters of Europe. The genus name Osmerus means "odorous", referring to the fact they give off a freshly cut cucumber-like smell when freshly caught. These fish reach sexual maturity when around 12cm long. Their average size is 15 to 18cm long, but the largest recorded individual was a whopping 45cm in length. They primarily inhabit marine midwaters and estuaries, with a freshwater form found in larger lakes in Northern Europe. They are carnivores with surprisingly ferocious teeth for their size, their diet consists primarily of crustaceans and shrimp, with larger individuals eating small fish. They are considered harmless to humans. They enter rivers to spawn between February and May, each female laying 8,000-50,000 small yellow eggs along lake shores and fast-flowing sandy or gravelly river beds. Many individuals die after spawning.

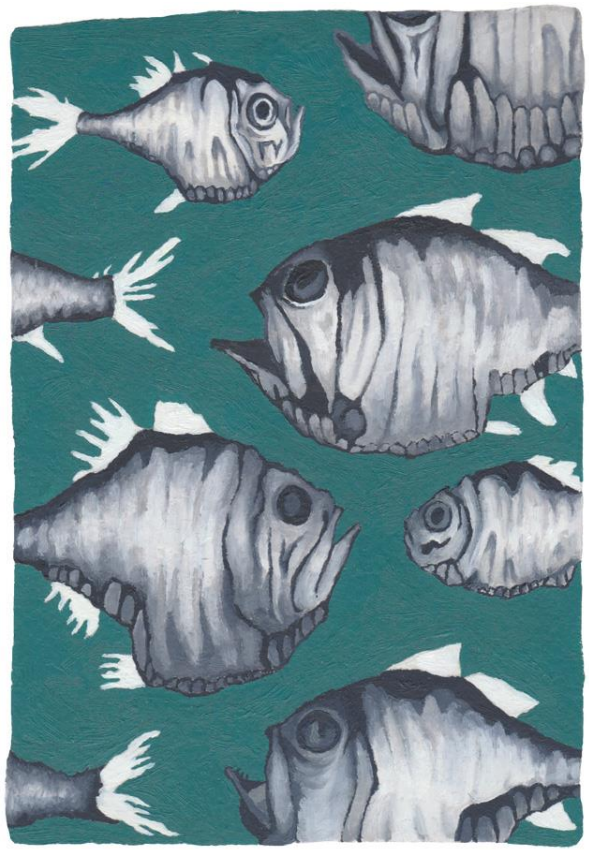
European Smelt are used by humans as food, as bait and as a source of fish oil. During spawning the fish can be easily caught with nets as they travel upriver. They are considered of 'Least Concern' on the IUCN Red List, but local populations are threatened by pollution and barriers to their migration upriver to spawn, such as dams. Generally their populations are in good health. In the UK, the minimum size they are allowed to be caught at is 20cm long. This species is not of commercial interest in the UK so is rarely targeted by commercial fishermen. In Germany, Russia and Eastern Europe, Smelt are a regional specialty, where it is fried in butter and eaten whole without removing their soft bones.

About the Artist: Rebecca Groom is an artist with a background in science who specialises in designing and making realistic soft toys of various animals, both extant and extinct. Her plushies are created using modern techniques- she paints her patterns digitally, which are then printed onto fabric, cut out and sewn by the artist into 3D soft sculptures. The custom printed fabric allows greater creative freedom than working with plain fabric and lends her work its distinctive style. Rebecca has a passion for bringing extinct creatures to "life", informed by the latest scientific knowledge. This desire to communicate scientific understanding is reflected in her Palaeoplushies series, which includes animals such as dinosaurs, pterosaurs, marine reptiles and more recently extinct creatures such as the Thylacine, all presented in a tactile, easily understood form. Recently she has begun to make soft toy fish, inspired by her own tropical freshwater aquarium. The 200Fish project marks the creation of her first native saltwater fish design, which will hopefully not be her last!

Fish #061 Fierasfer *Echiodon drummondii* Andrea Weller
Papier Maché

An eel-like little viper with teeth. Despite being described as common, images and information about size are thin on the internet. Found around the Northeast Atlantic coasts of southern Norway, western Denmark and around the British Isles. Living at a depth of 52 to 403 m and not being of interest to fisheries (maybe that's why there aren't many images) it is thought to feed on small invertebrates and fish and 'small bottom animals'.

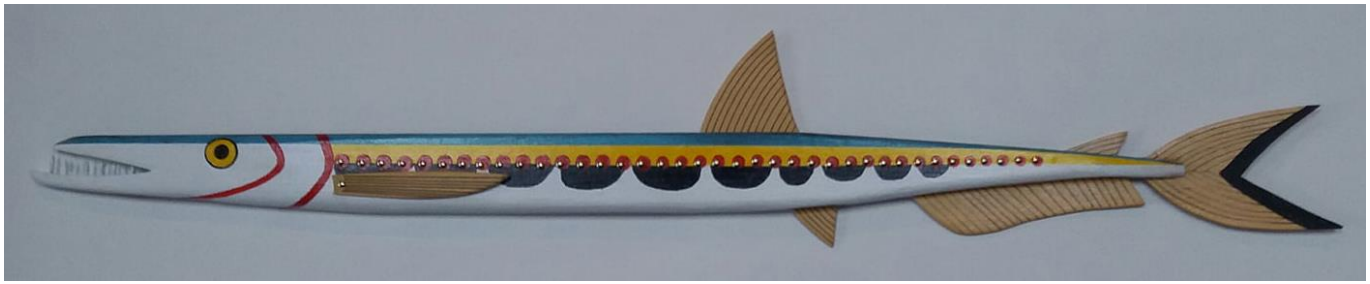
Fish #062 Silver Hatchetfish *Argyropelecus olfersii* Ellie Denwood Oil on paper



Scientific facts: the Silver Hatchetfish can grow to a maximum length of 9cm. They have large pupils, allowing them to see dim objects underwater where the light barely penetrates. This is useful, as they tend to live in deep water between 100m and 800m below the surface. The *Argyropelecus olfersii* is also bioluminescent, meaning that it can make it's own light to use as a 'biological torch', as camouflage or as a means of communication. They are mainly found in the Eastern Atlantic, from Southern Iceland to the Canary Islands, as well as in some areas of the South Pacific. They feed on crustaceans and other small fish. Their conservation status has 'not been evaluated', but it seems that there are plenty around!

Why I chose it: I'm sorry to say that I originally chose the Silver hatchetfish because I thought it was a pretty, colourful flying fish. I later realised that there are two types of Silver hatchetfish - the tiny, pretty one which is native to Brazil, and the *Argyropelecus olfersii* which looks rather different and is found in the Atlantic. It is generally thought to be quite an unattractive specimen, and I couldn't find many people who had written about it or celebrated it before. I'm happy to say that I grew quite fond of this hardy fish while I was painting it, and now have quite an appreciation for its large eyes and grumpy expression.

Fish #064 Spotted Barracudina, *Arctozenus risso* Tony Bellars
Wood, brass pins, acrylic paint and lacquer Length 60 cm (twice life size)



Arctozenus risso Bonaparte 1840. With many synonyms, it is a species of barracudina and not related to the tropical barracudas. It is named after the European ichthyologist Antonio Risso. It is found in all the oceans of the world except for the tropical equatorial zone. The fish is found from the surface to 2200 metres; its maximum length is 30 cm. It is found in small schools or by itself, feeding on shrimps and small fishes. It is regarded as of least concern in the IUCN red list status. It is not used by man but is caught as a by product in deep water fisheries. It is an important food source for dolphins, albacore and cephalopods. The earliest fossil record is from the upper-Tertiary Miocene period.

I have been fascinated by birds, boats and fish since childhood. With an enquiring mind, a house full of books, cigarrette and trade cards to collect and indulgent parents who encouraged my early attempts at drawing. Living near the sea, I fished with rods, long lines and shrimp nets and enjoyed identifying the fish and shore creatures. I remember a lump sucker, *Cyclopterus lumpus*, and a Sun fish, *Mola mola*, washed up on the tide line. The latter I have seen on sailing trips crossing the North Sea and in the Mediteranean. In my early teens I once caught a twenty pound conger eel from the shore in Dorset. A career boat building, art school and teaching were to follow. Always an artist and initially a painter I found making fish, boats and birds from wood more interesting. A chance gift from my late father's library, Victor Bellars, artist and fine angler. Author of fishing books. His gift included, Jonathan Couch's A History of the Fishes of the British Islands and Fish of the World by Hiroshi Aramata. This reprinted collection of 19th century paintings introduced me to the earliest colour catalogue of exotic fishes. Dating from 1719 and published by Louis Renard and illustrated by Samuel Fallours, it is one of the rarest books in the world. His highly decorative fish have been an influence on my work, including my work the Spotted Barracudina. I chose to do this fish as I am drawn to these streamlined fishes, mackerel, trout, pike, perch and the barracudas, although this fish is not related to them. I have made it twice life size and have used a richer pallet of colours in the naive manner of childhood, whilst taking liberties with the bone-like lateral line plates, mine being red dots and raised brass pins. I hope an ichthyologist might still recognise the species?

Fish #066 Glacier Lantern Fish
Benthosema glacial
Fiona Radford

A tiny fish, just a few centimetres long, that dives to enormous depths during the day and rises to feed in surface waters at night, when it can glow in the dark.

Fish #067 Spotted Lantern Fish Myctophum punctatum Natalie Hurst

Acrylic on slate

Fish #069 Atlantic Cod *Gadus morhua* Aimie Elliot

Acrylic paint on board 13 x 18 cm

I chose to paint the Cod because it links times past and present for me. My maternal great Grandfather was a Grimsby skipper. When I was growing up, I was always told that you don't eat Cod because it's a scavenger. You sell the Cod on and keep the Haddock to eat yourself. I often think about this when I am in the fish and chip shop in Sutton on Sea buying lunch. My paternal Grandmother mended fishing nets which my dad remembers hung over the back walls of their terrace in Grimsby. This was paid piece work and a common source of income for women in those days. I also like the stoic sense that it's simple name suggests.

Gadus morhua (Atlantic Cod) lives In the western Atlantic Ocean, cod has a distribution north of Cape Hatteras, North Carolina, and around both coasts of Greenland and the Labrador Sea; in the eastern Atlantic, it is found from the Bay of Biscay north to the Arctic Ocean, including the Baltic Sea, the North Sea, Sea of the Hebrides, areas around Iceland and the Barents Sea. The largest individual on record was 6 feet (1.8 m) long and weighed 211 lb (96 kg), however usually the cod is between 24 inches (61 cm) and 4 feet (1.2 m) long, and weighs 88 lb (40 kg). There is generally no difference in weight or size between sexes of Atlantic Cod. Atlantic Cod can live for 25 years, and usually attain sexual maturity between ages two and four, although cod in the northeast Arctic can take as long as eight years to fully mature. Colouring is brown or green, with spots on the dorsal side, shading to silver ventrally. A stripe along its lateral line (used to detect vibrations) is clearly visible. Its habitat ranges from the shoreline down to the continental shelf.

Several cod stocks collapsed in the 1990s (declined by >95% of maximum historical biomass) and have failed to recover even with the cessation of fishing. This absence of the apex predator has led to a trophic cascade in many areas. Many other cod stocks remain at risk. The Atlantic cod is labelled vulnerable on the IUCN Red List of Threatened Species. Stomach sampling studies have discovered that small Atlantic cod feed primarily on crustaceans, while large Atlantic cod feed primarily on fish. In certain regions, the main food source is decapods with fish as a complementary food item in the diet. Wild Atlantic cod throughout the North Sea depend, to a large extent, on commercial fish species also used in fisheries, such as Atlantic mackerel, haddock, whiting, Atlantic herring, European plaice, and common sole, making fishery manipulation of cod significantly easier. Ultimately, food selection by cod is affected by the food item size relative to their own size. However, providing for size, cod do exhibit food preference and are not simply driven by availability. Atlantic cod are apex predators in the Baltic and adults are generally free from the concerns of predation. Juvenile cod, however, may serve as prey for adult cod, which sometimes practice cannibalism. The cod produces a protein similar to antifreeze so that the fish may survive the freezing temperatures found in the North Atlantic. Once a cod is hauled up from the freezing waters, its meat will instantly crystallize as the fish no longer produces the protein.

The Atlantic Cod has been referred to as the "sacred cod" for a few reasons. First, according to New England folklore, the cod was the fish which Jesus multiplied to feed the crowds of people. The other reason concerns the difference in lateral line colours between the cod and the haddock. Jesus was thought to have thrown the cod into the sea with his hands, leaving a white lateral line on the fish, whereas the haddock was thought to be cast into the sea by Satan, who left his black mark on the lateral line of the fish. There have been historical accounts of cod as large as men. In 1838, a 180-pound fish was caught off George's Banks and in 1895, a six-foot cod weighing 211 pounds was caught off the coast of Massachusetts.

Fish #070 Haddock *Melanogrammus aeglefinus*
James Pocklington
watercolour 32 x 25cm

With its distinctive dark "thumbprint" by the pectoral fin, the haddock is easily identified, a commercially important fish it is one of the big 5 of fish species along with cod, tuna, salmon and prawns. These 5 species represent 60% of seafood consumed in the UK.

The haddock inhabits the deep sea, rarely found less than 50 metres down; it feeds on shellfish and worms and can grow to one metre long but is more usually about 35cm in length. Listed as vulnerable by the International Union for the Conservation of Nature, the haddock also appears on the Greenpeace Red list of fish that are at a high risk of being caught from unsustainable fisheries. The haddock faces an uncertain future at current levels of commercial harvesting.

The importance of the haddock to the fishing town of Grimsby has been celebrated with the adoption of "Harry the Haddock" as a Grimsby Town Football Club mascot.

Ode to the Haddock

You carry the print of St Peter, others say it was Satan.
From deep sea anonymity to such large numbers taken.
Cursed to possess such sweet flesh,
Fitted so neat into newspaper pleat,
That brave men hauled you from the deep.
This blessing helped the hungry sleep.

Cursed and blessed, for a century or more
Blessed and cursed, a wild food store
Perhaps it's time to let you be,
To return once more to obscurity.

Fish #071 Whiting *Merlangius merlangus*
Cathy Rees Painted ceramic 24 cm

The whiting is similar in appearance to its larger relatives the cod, the haddock, the coley and the pollock. It has 3 dorsal fins separated by small gaps the third fin extending almost to the tail fin. The tail is not forked having almost a square end. The 2 anal fins are very close together nearly touching one another and together with the anterior fin are elongated. The pectoral fin is also long and projects beyond the anal fin. The upper jaw projects slightly beyond the lower and the lateral line is continuous along the length of the fish. Colours vary quite a lot and there is often a small dark blotch at the upper line of the pectoral fin.

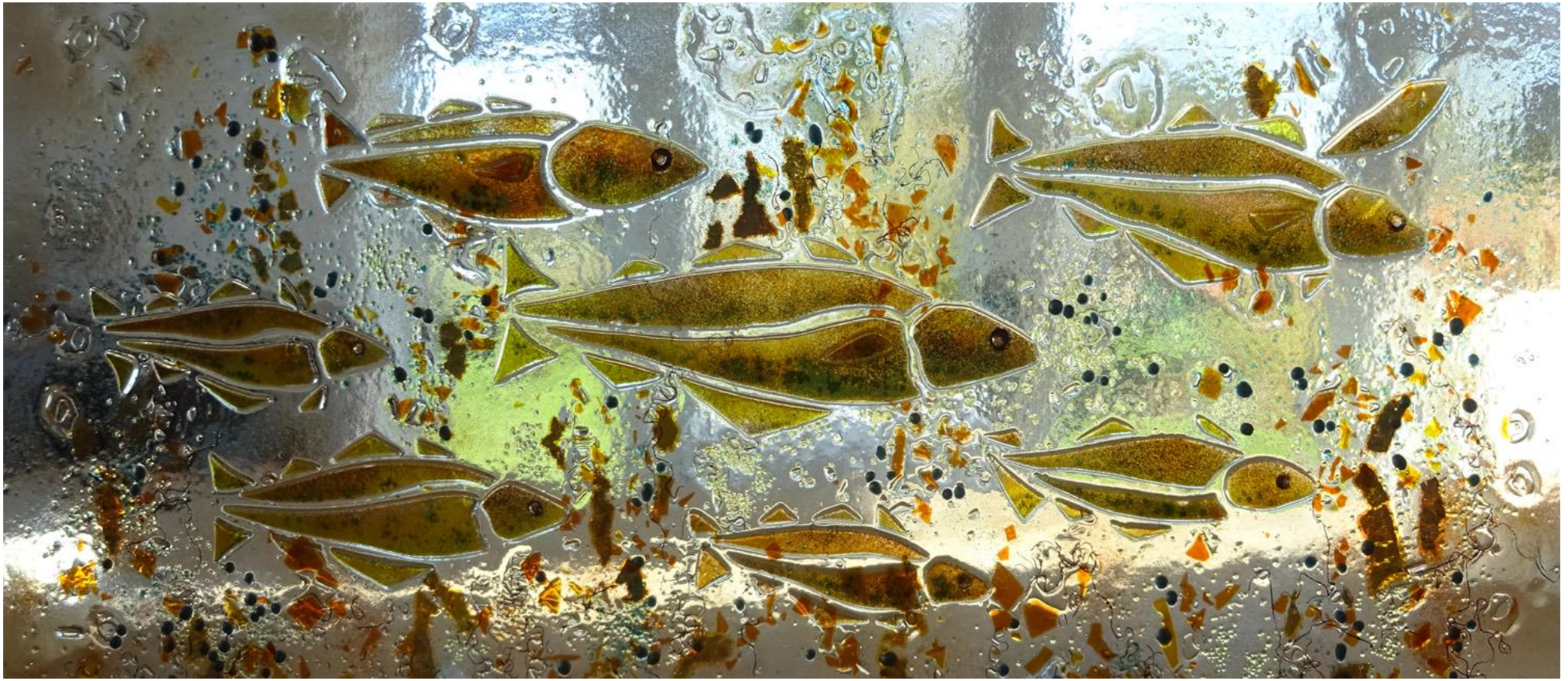
Fish #072 Blue Whiting *Micromesistius poutassou*
Biff Vernon
Oil on board 61 x 61 cm

Blue Whiting is a small fish, reaching a maximum size of about 50 cm but commonly caught when 25 to 35 cm long. It prefers deeper water than the Whiting*, Merlangius merlangus*, so in the North Sea it is mostly found west of Norway. The greatest abundance of Blue Whiting, is on the continental slope west of Ireland and Scotland where enormous shoals form in the spring at depths of 200 to 500 metres. After spawning they migrate northwards towards the Arctic, dispersing over a large area. The commercial fishery concentrates on the dense shoals in the springtime breeding season. There was little fishing for this species before the introduction of echo-location in the 1970 but then the annual catch grew to over two million tonnes in the early 2000s. Weighing some 200 grams each, that represents about ten billion fish.

From the fishmonger's and consumer's point of view, Blue Whiting presents a few issues. The fish goes off rather quickly, just a few days when packed in ice. It needs quick freezing and quick processing. Consequently, only a small part of the catch is eaten by humans, and then mostly in products such as fish fingers, pies, and sticks. You don't often see Blue Whiting fillets in the fishmonger's window.

Most of the Blue Whiting catch goes for 'industrial use', turned into fishmeal and then added to feed for farmed salmon, pigs and poultry or even fertiliser. Over the last decade the catch has dropped from its 2004 peak of 2.4 million tonnes and it is now regarded that one million tonnes may be a sustainable quantity. Whether we are justified in taking so many fish from the sea to feed the chicken we eat, or whether we should leave them for the tuna and whales to eat is a thought we might dwell upon.

Fish #073 Pollack *Pollachius pollachius* Lynn Baker
Glass 31 x 66 cm



Pollack is a mild flavoured fish and is said to be a more sustainable alternative to cod and haddock. Protein rich foods such as fish provide us with amino acids and are the building blocks for our bodies. Fish has so many nutritional benefits. It is a source of protein and is low in fat. Eating a greater variety of fish provides us with different vitamins and minerals offering a wide range of benefits to our bodies.

Pollack fillets are delicious when baked with new potatoes, cherry tomatoes and thin slices of ham. Baked in the oven for 12-18 minutes they make a quick, nourishing and tasty midweek meal.

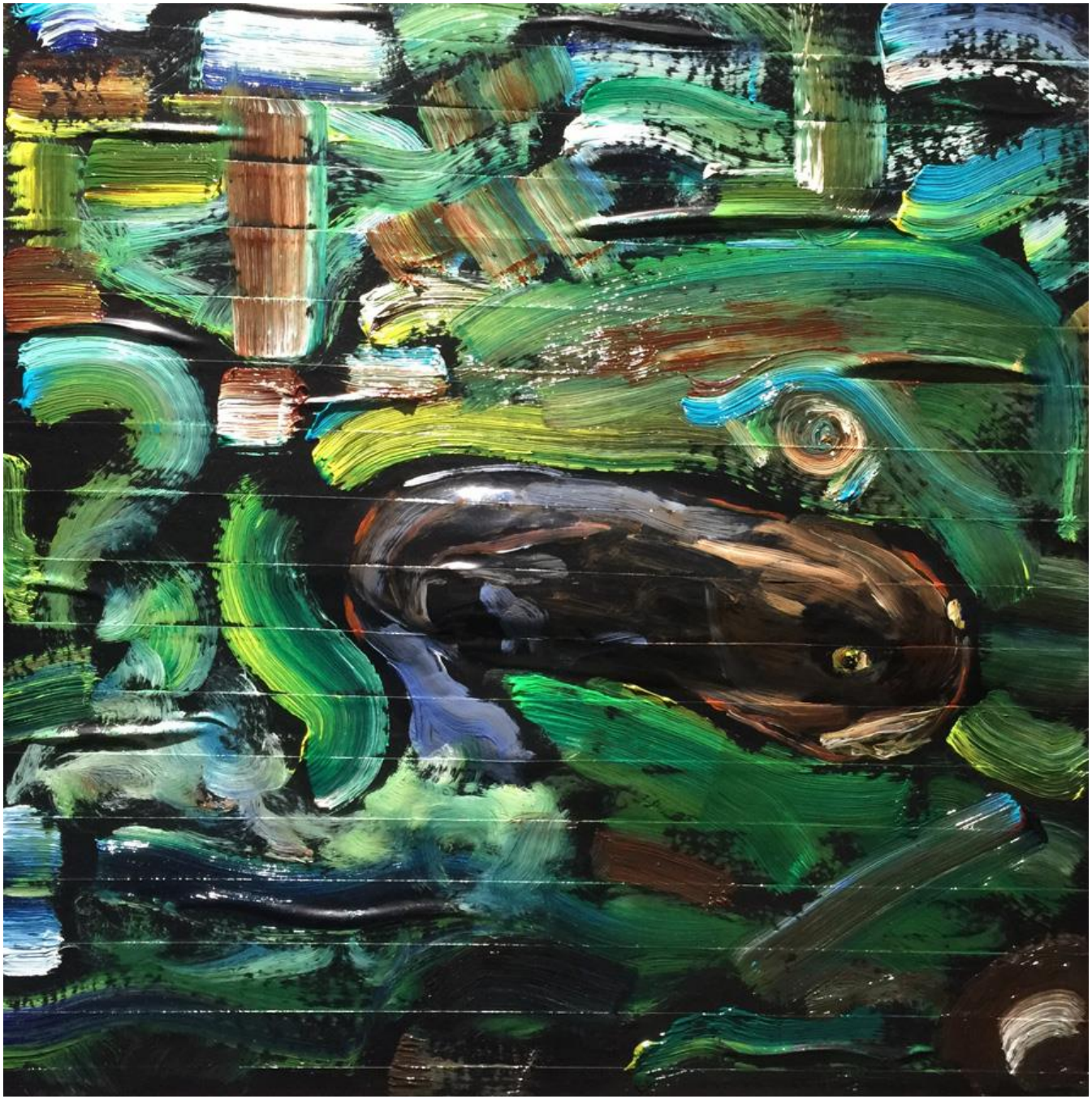
Fish #074 Coalfish *Pollachius virens* Peter Slater
Oil

Also known as Saithe, Coley, and Black Pollock, its distribution is widespread throughout all UK and Irish waters, but more common in North East England and Scotland. It feeds mostly on other fish such as herring, sand eel and small mackerel. Coalfish also feeds on the seabed for crustaceans and marine worms. It has a streamlined body with three dorsal fins. Back is olive green or brown to black with straight, white lateral line. Flanks and belly are white to silver. Lower jaw only protrudes slightly. Very small barbule on chin, although this may be absent on some fish. Coalfish are a relatively common species around most of the UK. They feed primarily by hunting other fish but will also scour the seabed for any food which can be found there. For this reason coalfish can be caught by both bait fishing and on lures.

I chose to draw the Coalfish or Coley as I have fond memories of my Dad, who was the Skipper of the Research Vessel 'Bernicia' for Newcastle University, sailing from Blyth Harbour taking me to sea with him as he carried out his survey work for the University Dove Marine Laboratory. He named every creature he brought up from the sea using nets and at times a grab to reach the sea bed species. I loved listening to him as he explained mysteries from a very different world.

My brothers Andy and Roland loved fishing in their spare time and I remember hearing the cry “it's a Coley” more often than any other they caught, so I felt I wanted to try to capture this prolific fish as a tribute first of all to the fish and then to my family including my Mam who used to cook the catch.

Fish #075 Tadpole Fish *Raniceps raninus*
John Wyatt Clarke
Oil on electrician's insulation tape on board 30 x 30 cm



You've got to feel for this fish. All anyone says about it is 'what the hell is this?' (from the sea anglers) or 'of no interest' (from the commercial fishers). FishBase describes its head as depressed, and you're hardly surprised. Even its name tells you that it's just a fish-version of something better. You get the feeling that if it ends up in an aquarium, it's there for us to laugh at, with its glum face and overgrown frog-baby looks. It makes sense that it's solitary and secretive, hiding in the seaweed 20m down and never moving far.

But it can have beautiful colouring, a velvety blue-black or a deep reddy-brown, and its eyes are like a teddy bear's. Its head is quite elegant, though too large for its body, and its top and bottom fins ripple beguilingly along the length of its body.

It's a member of the Cod and Haddock family, usually around 20cm long so it's about actual-size in my painting. It's very much a North Sea Native, found only here, in the Channel and off Ireland, living 20m down on the rocky bottom in seaweed and eating smaller fish, worms and shellfish.

Fish #077 Pouting *Trisopterus luscus* Lynda Parker
Digital drawing

Fish #076 Norway Pout, *Trisopterus esmarkii* Fish #077 Pouting, *Trisopterus luscus* Fish #078 Poor Cod, *Trisopterus minutus* Janet Swift
Acrylic paint on found ironstone vase 21 cm tall, 17 cm maximum diameter

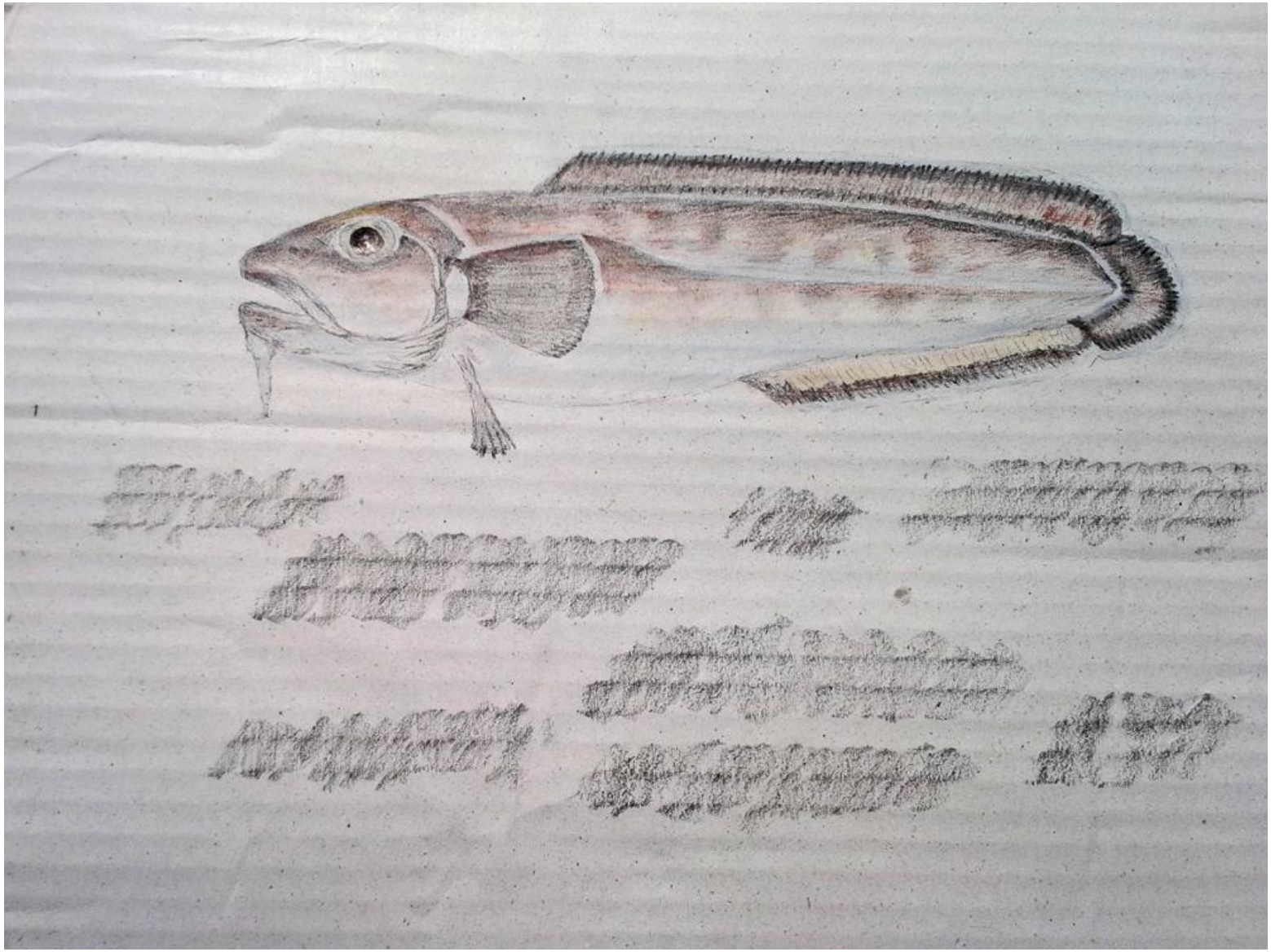
Trisopterus genus

So plentiful within the sea,
We feed puffin, fish and seal.
So plentiful within your nets,
You grind us to fishmeal.

Fishes from the genus *Trisopterus* include *T.minutus*, (Poor Cod) which reaches an average length of 40cm and is common around the coasts of Britain and Ireland. It can be found from mid Norway to Morocco including the western Mediterranean. *T. Luscus* (Pouting) reaches an average length of 20 - 30cms. It is widespread around the coasts of Britain and Ireland. and *T. Esmarkii* (Norway pout) can grow to 35cms but commonly 19cms. It it is found off the coast of Britain and from the Barents Sea down through the North Sea as well as the waters off Norway and Iceland. This group of plentiful fish are very similar in appearance, the stripes of pouting fading once the fish is out of water for some time. They are unfussy eaters feeding off any small fish, crustaceans, eggs, sea worms and anything on the sand or muddy sea bed. As they mature they move out to deeper waters. They, in turn, are food for larger fish such as cod and bass and also eaten by seals. They are plentiful in the seas and as a consequence not on the list of any endangered species. Poor cod are eaten in many south European countries and all the *Trisopterus* species I have painted are plentiful enough to be trawled for manufacturing fish meal as well as fish oil.

Fish #079 Cusk, *Brosme brosme*, Catherine Parker

Assorted pencils - graphite, chinagraph and coloursoft, plus hard pastel sticks, on recycled cardboard 25 x 33 cm



The cusk, a small-scaled, cod-like marine fish of temperate climates, inhabits the deep offshore rocky, cavern-like bottoms of either side of the North Atlantic. Of the ling family *Lotidae,* it is the only species of the taxonomic genus *Brosme*. (Note, some sources claim it is of the cod family *Gadidae*.)

Average size: 1 m long; it is a slow grower taking over 5 years to reach 0.5 m. Weight: 2.5 kg to 10 kg. Lifespan: up to 20 years.
It varies in colour, from red-brown to green-brown to yellow, with a belly of a paler shade. Eats mainly crabs and molluscs while its common predators are the blackrim cusk-eel, thorny skate and windowpane flounder and seals.

It is a somewhat solitary soul delving into the dark depths (20m and beyond) yet still at risk of ending up as a 'bycatch'. Is not specifically targeted by fishermen and is caught by accident. Anglers are no risk to cusk as the fish live mainly beyond their reach. However, the cusk is a U.S. National Marine Fisheries Service Species of Concern, meaning the U.S. Government's National Oceanic and Atmospheric Administration, National Marine Fisheries Service, has some concerns about its status and threats, but there is insufficient information for the species to be listed under the U.S. Endangered Species Act. Cusk is evidently good to eat and has a mild lobster-like or cod-like taste; popular particularly in Scandinavia and North America

Fish #081 Northern Rockling *Ciliata septentrionalis* Peter Beck
Acrylic and oil pastels 51 x 41 cm

Although this is a common species with no obvious threats, the plastic pollution which sits in our seas bears a huge threat to all marine life. The northern rocking can be found in the north-east Atlantic mostly around the British Isles, but can be found as far north as northern Norway, the Faeroe Islands and Iceland. It is usually found between 10 - 90 meters deep but the creature also likes to sit on the sand or mud bottoms of the ocean. The northern rocking can usually be found eating all sorts of crustaceans such as crab and lobster. This fish which can grow up to 20cm is usually preyed upon by the Atlantic cod.

Fish #082 Fourbeard Rockling *Enchelyopus cimbrius* Iverna Keating
Acrylic on paper 21 x 29 cm

A long slender lotid fish, found in the North Atlantic ocean. It has four barbels, one on its chin and the rest on its snout. It's skin is slimy and the scales are not easy to see. It is a bottom-dwelling fish, living on muddy sand between patches of hard substrate, or on the smooth, soft ground of the deep sinks of the continental slopes of the Atlantic. It feeds on crustaceans, polychaete worms, molluscs and other invertebrates. It migrates inshore in autumn and winter, and offshore in spring and summer. Its depth range is about 20 to 500 m (66 to 1,640 ft). It usually breeds between February and August, releasing the spawn in deep water after which the eggs float towards the surface. It is of minor importance in commercial fisheries.

Fish #083 Shore Rockling *Gaidropsarus mediterraneu* Jean Melville
Watercolour 27 x 37 cm

APPEARANCE: Small elongated eel-like fish, mottled brown (good camouflage). Three barbels on its head (one above each nostril, one on the lower jaw). Dorsal fin and anal fin run along the main length of the body.
HABITAT & GEOGRAPHIC SPREAD: Found around the coasts of the Mediterranean Sea (north-west Africa, southern Europe) and all the way north to the coasts of the UK and Norway (eastern Atlantic). Usually found in rocky areas with plenty of algal cover.
DEPTH: It can be found at various depths down to 27 metres.
SIZE: Normally it will grow to 50cms in length.
WHAT IT EATS: Principle food is crustaceans, worms and small fish but will eat anything including rotting fish.
WHAT EATS IT: Its main predators are common grey and harbour seals.
COMMERCIAL STATUS: Although a member of the cod and hake Family (*Lotidae*) commonly fished for commercial purposes, this particular Family member is not commercially fished but used as a by-catch and processed as fishmeal. It is sold fresh at markets but due to its slimy skin it is not commonly eaten.
CONSERVATION STATUS: Classed as "least concern" due to its common occurrence. Its abundance is considered a pest by anglers fishing for other species.
ORIGIN OF NAME: *Gaidropsarus*: from Greek, ga, ge = the earth + ydro = water + Greek *psaros* = speckled, starling.
IN GENERAL: A common fish which seems to be not readily edible ... by humans anyway! Like all things in life it must play its part in the complete cycle of life and place in the food chain.

MY CHOICE OF FISH: I live within a fairly artistic family household ... two artists (myself and my daughter Dee Dee) and a musician (my son-in-law George - his little ditty contribution below). Dee Dee chose a fish based on its rarity and I followed suit but chose a common 'associate' of the sea! Although the Shore Rockling doesn't seem under any threat, there's the considerable threat to the seas as a whole. At the end of the day all things deserve quality of life and this 'quality' is depreciating by the day for all the planet's marine environments. Dee Dee's Dealfish may represent the broker of a fairer 'Deal' for all sea creatures but my Shore Rockling would represent the many fishes of the sea that stand behind those brokers in their plight.

As the Scottish saying goes 'many a mickle makes a muckle' I hope my painting, 'Spot the Fish', represents one mickle impression making an accumulating muckle impact on our future sensitivity about how we treat our fellow planet dwellers.

Elegantly undulating like a wind blown flag
It glides and billows through rocks and slag
Hunting its prey of crustacean and worm
To eat its slimed body would sure make me squirm.

George

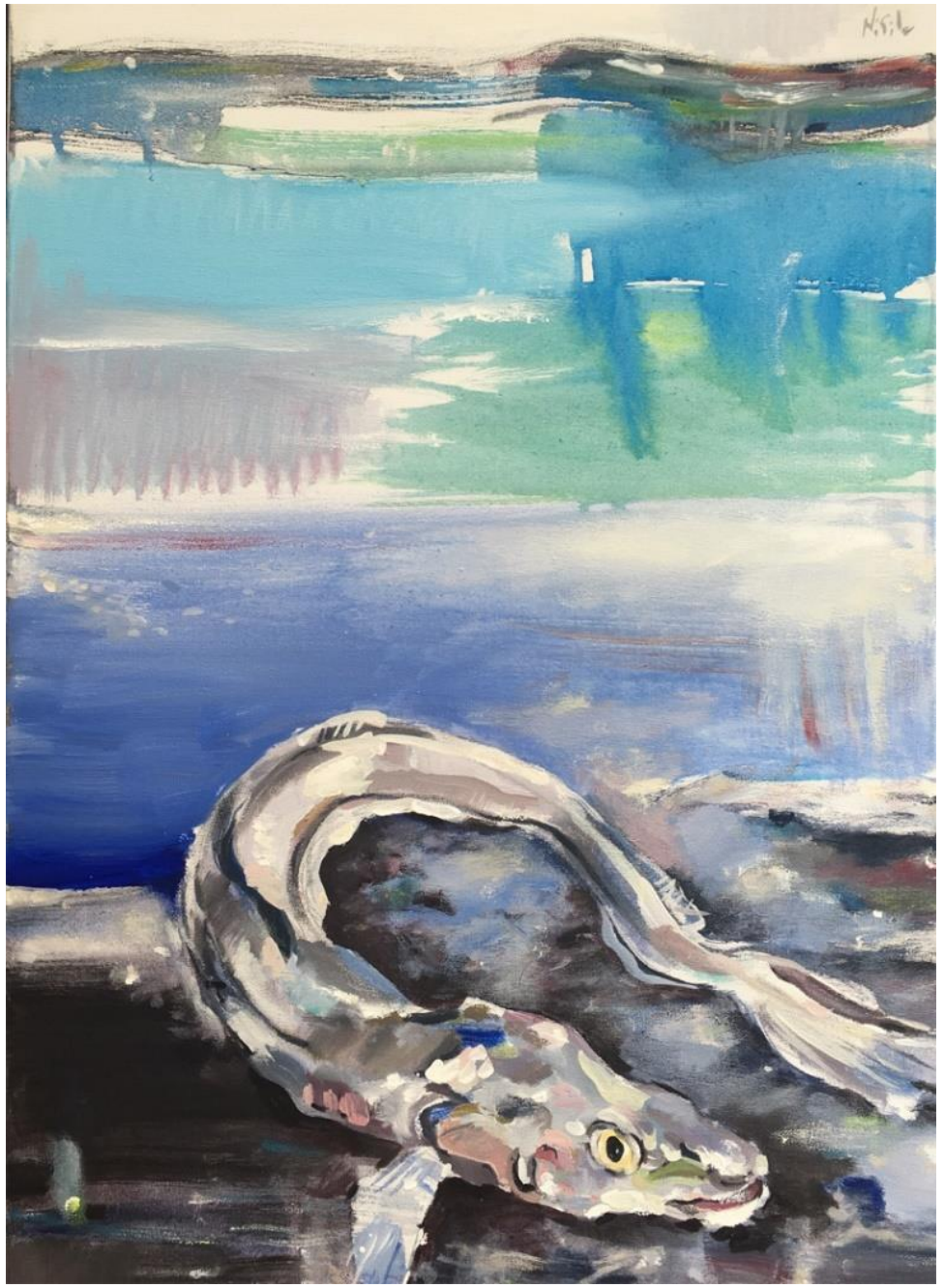
Fish #084 Three-bearded Rockling *Gaidropsarus vulgaris* Alison Thwaite

Fish #85 Blue Ling, *Molva dypterygia*, Vasile Nicolae

Acrylic on canvas

I am a beautiful creature that lives deep in the sea. I feed on gobies, crustaceans and squid. My eyes are large and I twist and turn with my long , slender body. I am a member of the cod family.

The trawlermen find me valuable and I am caught by them for human consumption and occasionally reduced to fishmeal. Please don't target me when I'm spawning as my species is severely depleted. I am the Blue Ling, *Molva dypteryia*. Treat me with respect.



Fish #085 Blue Ling, *Molva dypterygia*, Robin Conybeare
Watercolour on paper 16 x 24 cm

A relative of the White Ling, *Molva molva*, commonly found on the continental shelf at depths of 600-1,000 metres in the Rockall Trough and Norwegian trench, and at shallower depths in the Faroe-Shetland Channel. It is a hard fighting predator with a powerful body, long fins, large eye and sharp teeth - the perfect attributes for hunting fish in deep water.

Fish #085 Blue Ling *Molva dypterygia* Sarah Wilkinson
Recycled Blue (Bombay Sapphire) fused glass, silver leaf 68 x 20 x 1.5 cm

Found: Deep waters around Europe, Greenland and North America, found on the west coast of Ireland and the Faroe-Shetland Channel to the north of Scotland. The Blue Ling cod is usually found on the continental slopes at depths of 300-500m.
Size: Grows up to 150 cm (60") long and weighs up to 130lbs.
Description: *Molva dypterygia* is a member of the cod-like family with a slender long body. Eel shaped with long, slim fins and short first dorsal fin and long second dorsal fin. The mouth has protruding lower jaw and very small sharp teeth, with very large eyes.

Colour: Blue Ling are very distinctive, with greyish flesh with brown and green spots and bright blue inside. They get their name form the bright blue to turquoise flesh found on the inside. The lingcod is a popular eating fish due to its bright blue flesh colour, however the colour is destroyed when cooked.
Food: The fish is found on the bottom of the seabed and feeds on crustaceans, especially octopus and squid.

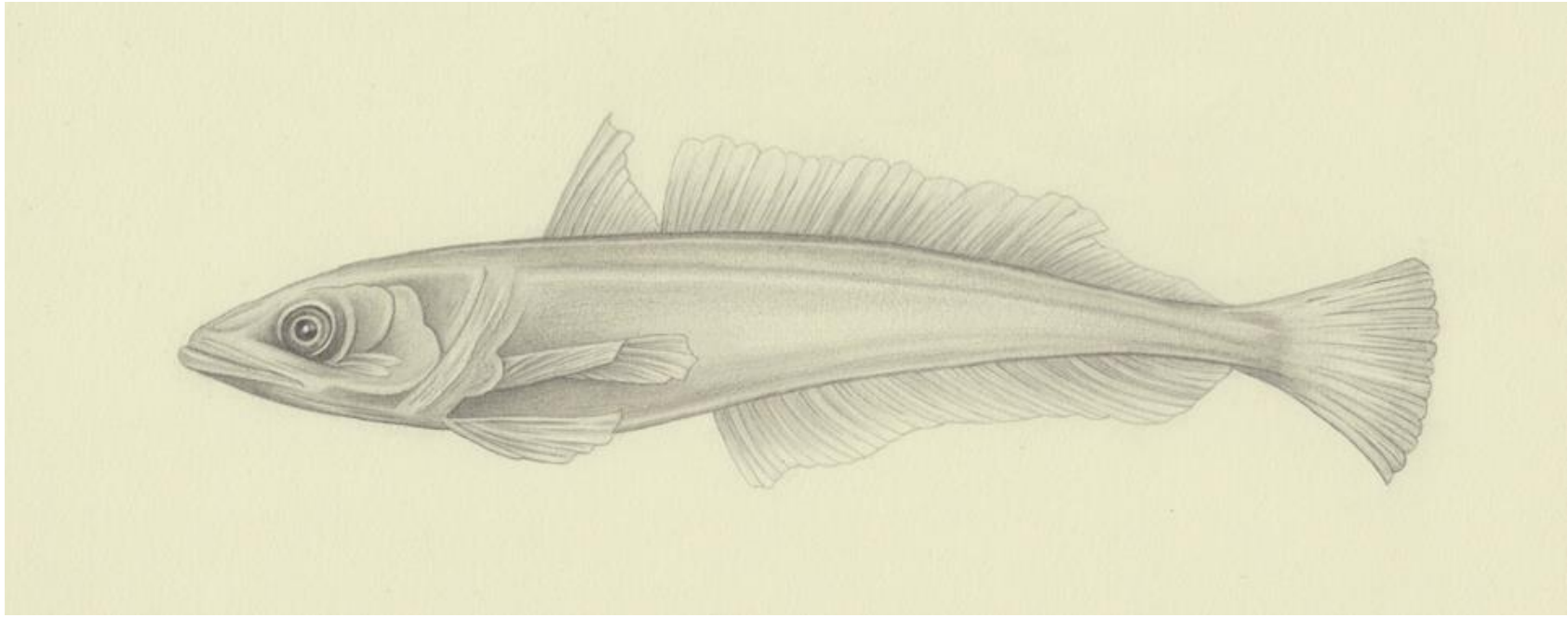
Special thanks to Bombay Sapphire Distillery for supplying the empty glass gin bottles that were recycled to create the distinctive blue glass colour for the fish. Also a special thanks to all the staff at Creative Glass UK for the use of their kiln and all their helpful advice with fusing the recycled glass.

Fish #087 Roundnosed Grenadier *Coryphaenoides rupestris*
Leanie Piek

One of my favourite phenomena in biology is when an animal is called exactly what it is. The layman term of the *Coryphaenoides rupestris* is the Roundhead Rat-tail. Beautiful, isn't it? Other names include the Roundnose Grenadier and the Rock Grenadier.

These fish are quite large, reaching over a metre at maturity. The females reach maturity when they are nine to eleven years old and the males when a little younger. The maximum reported age is 54 years. 54! That's not bad even by human standards. The fact that the Roundhead Rat-tail takes a long time to mature, sadly makes it vulnerable to extinction. On these grounds, the United Kingdom listed this fish as a 'UK Priority Species' for conservation purposes in 2010. It was suggested that if no actions to conserve the fish were taken, it would become extinct by 2020. It's current status is critically endangered. Its threat to humans are officially listed as HARMLESS. I have grown rather fond of this fish. I reckon we should keep it.

Fish #088 European Hake *Merluccius merluccius* Jessica Bell Pencil



Fish #089 Greater Forkbeard *Phycis blennoides* Teresa Hodges
Acrylic 20 cm x 50cm

Phycis Blennoides, the Greater Forkbeard, is found throughout European waters, from Norway and Iceland, the North Sea and the NE Atlantic, to the western Mediterranean and the coast of Senegal. They grow up to 3ft in length, and weigh up to 7lb. Living in deep offshore waters, with larger specimens moving into even deeper places, they are happy with seabeds ranging from rock and coral to sand and mud. Smaller fish feed on marine worms, dislodged shellfish, prawns and shrimps. Larger fish are also partial to small fish and squid.

The Encyclopaedia Metropolitana (1845) describes the name, *Phycis*, as from the Greek '*psári*,' "so-called from being supposed to live among sea-weed." On the west coast of Ireland, it has long been known by fishermen as Sweaty Betty, a name recently taken up by an enterprising fishmonger and restauranteur. In Cornwall, it is known as Plus-Fours. In "Food in the Ancient World A-Z" Andrew Daley notes it was one of several fish known in Latin as *Asellus*, "little donkey," and its minced flesh used in "milk patina," an ancient version of a kind of blancmange, a dish I think should perhaps remain in ancient times...

Not commonly used in cooking, it has recently been proving popular on plates in Galway, partly as a result of the Fisheries Discard Plan, the policy of not discarding unwanted catch championed by Hugh Fearnley-Whittingstall. However, the Marine Conservation Society has given the Greater Forkbeard its highest rating of 5 (avoid eating). As a deep water species, it and its environment are under threat from commercial deep sea trawling, and its deep water habitat poses problems in assessing population numbers.

Fish #090 Opah *Lampris guttatus* Lee Sass

Fish #090 Opah, *Lampris guttatus* Lily Castaño Installation Tea Light candle, blue fabric, white sheet and white blanket

Opah is known as a moon fish or sunfish, king fish, red fin ocean pan and Jerusalem haddock. She is a large colourful deep red-orange bodied fish, with her belly rose and her fins are bright vermillion. . Two living species are recognized, although 6 species are found as a result of splitting the *L. guttatus* as they each have a restricted geographic range. The Lampreys *Guttatus* was named in 1788 and is thought to now habitat the ocean of the North Atlantic. Very little is known of Opah biology and ecology. Assumptions are made that they live out their entire lives in the open ocean, at depths of 50 to 500 m, with possible explorations into the bathypelagic zone.

The Opah is the newest addition to the list of regionally endothermic fish - having a warm heart and is able to keep most of its body consistently above the water temperature. Opah likes to swim and live amongst tropical to temperate waters of most oceans and eats squid and krill as well as small fish.

The Great White Shark and Mako Shark as well as man are predators, for purposes of the exhibition, its man who poses the biggest threat. Opah is a prized trophy for deep water fishermen and they are frequently caught in many longline tuna catches, alongside that of the Dolphin. Opah is becoming increasingly seen in the seafood market, having originated as sushi and sashimi dishes and is thought to be a popular food in Hawaii restaurants. The average meal only consists of An average of 35% of her and the remaining 65% is laid to waste.

I have chosen the Opah Fish as she is the most beautiful fish I have come across in the list of North Sea fish and I am concerned that her beauty will become a commodity. Opah - her absence in this installation for me only exists in memory, ceremony, and with this I hold a testament in the use of a single candle to her and her kind. Opah became so beautiful that thousands across the globe have hunted and wanted her for their pleasure. For the purposes of the installation, this memory is such as we've pushed Opah to extinction in our efforts to maintain our levels of status as consumers.

This installation represents Opah in memory and ceremony. For the purposes of the installation work, the candle represents the beacon that she is. I felt compelled to highlight that we embrace the challenges that global warming, climate change, sea level rise, ocean acidification and over-exploitation present to her and her kind. We as artists, have an opportunity to lead the way in making commitments to shed light on past, present and future issues and help overcome the challenges presented by mankind.

Fish #091 Giant Oarfish *Regalecus glesne* Lynn Bates
Acrylic on wooden tongue and groove board 58 x 170 cm

Ode to the Giant Oarfish

The Oarfish is an oddity
It lives its life in deeper sea
Often swimming vertically
Its dorsal fin moves rhythmically
Propelling it to where there'll be
Krill in great capacity.

The Oarfish has a silvery gleam
With darker markings in between
Its body's very long and lean
And from its head red pendants stream
It's like a creature from a dream
With features that are quite extreme.

Fishermen long gone before
When they found Oarfish on the shore
Told tales that then became folklore
Of serpents, monsters, snakes and more
Now that we know we can ignore
All tales of serpents - we restore
The Giant Oarfish evermore!

Lynn Bates

Fish #091 Giant Oarfish, *Regalecus glesne* Jane Haigh
Canvas board 30 x 10 cm

Fish #092 Dealfish *Trachipterus arcticus* Dee Dee Dewar
Watercolour and Mixed 34.5 x 51 cm

APPEARANCE: As a member of the ribbonfish family this fish has a pink dorsal fin running the length of its body (like a ribbon). Eel-like long slender body, bright silver in colour with faint black spots. No pectoral, pelvic, or adipose fins.
HABITAT & GEOGRAPHIC SPREAD: Home is the North Atlantic Ocean from the U.S, Norway and Iceland to Madeira Islands. Also present in the North Sea.
DEPTH: Although they are found in 300 to 1000 metre water depths they live in the mid-water zone (pelagic zone). They have been found swimming very close to the shore in small groups of two, or three (reason unknown).
SIZE: Maximum size of this species is probably 8-9 feet in length but usually found approximately half this size.
WHAT IT EATS: Natural prey is small fish and squid.
WHAT EATS IT: These fish are elusive and not much is known about them so what preys on them is speculative ... possibly bigger and meaner fish!
COMMERCIAL STATUS: They are not commercially fished. Their flesh is compressed due to living at greater depths and therefore unpalatable.
CONSERVATION STATUS: Not listed on any endangered species list.
ORIGIN OF NAME: *Trachipterus*: Greek, *trachys*, -eia, -ys = rough + Greek, pteron = wing, fin.
APPEARANCE IN FOLKLORE: Not much seems to be mentioned about the Dealfish itself but it could be amongst the 'sea serpent' myths of old. These 'sightings' are more associated with the Oarfish which is also a ribbonfish â€¦ both the same Order of fish but a different Family (Order *Lampriformes*, ray-finned fish). They are similar in appearance but the Oarfish is larger. Another mention in folklore is when Oarfish wash ashore it is an omen of a potential earthquake … !BEWARE! grouping of some Dealfish washed ashore (have we found a reason previously unknown … a natural seismometer!?!).
IN GENERAL: These fish are a bit of a mystery with being elusive and rarely encountered. They seem to live a solitary life other than the occasional groupings. Encounters are mainly, and unfortunately, when they are found dead when washed up ashore.

MY CHOICE OF FISH: We all hear of the plight of our sea creatures as we use the oceans as dumping grounds for all sort of things ... currently the main focus is on plastics but the marine environment is constantly under threat from one thing, or another (overfishing, global warming, acidification, water pollution, etc.). The Dealfish name shouted out to me asking the question "are our sea creatures getting a fair Deal?" ... the answer is "NO!". The Dealfish could potentially be the broker of a fairer deal! It's either fairer deal ... or no Deal(fish) at all!!! ... hence the Title of my art representation "Deal ... or no Deal".

Fish #092 Dealfish *Trachipterus arcticus* Janis Young Glass sculpture ‘What's the Deal?’

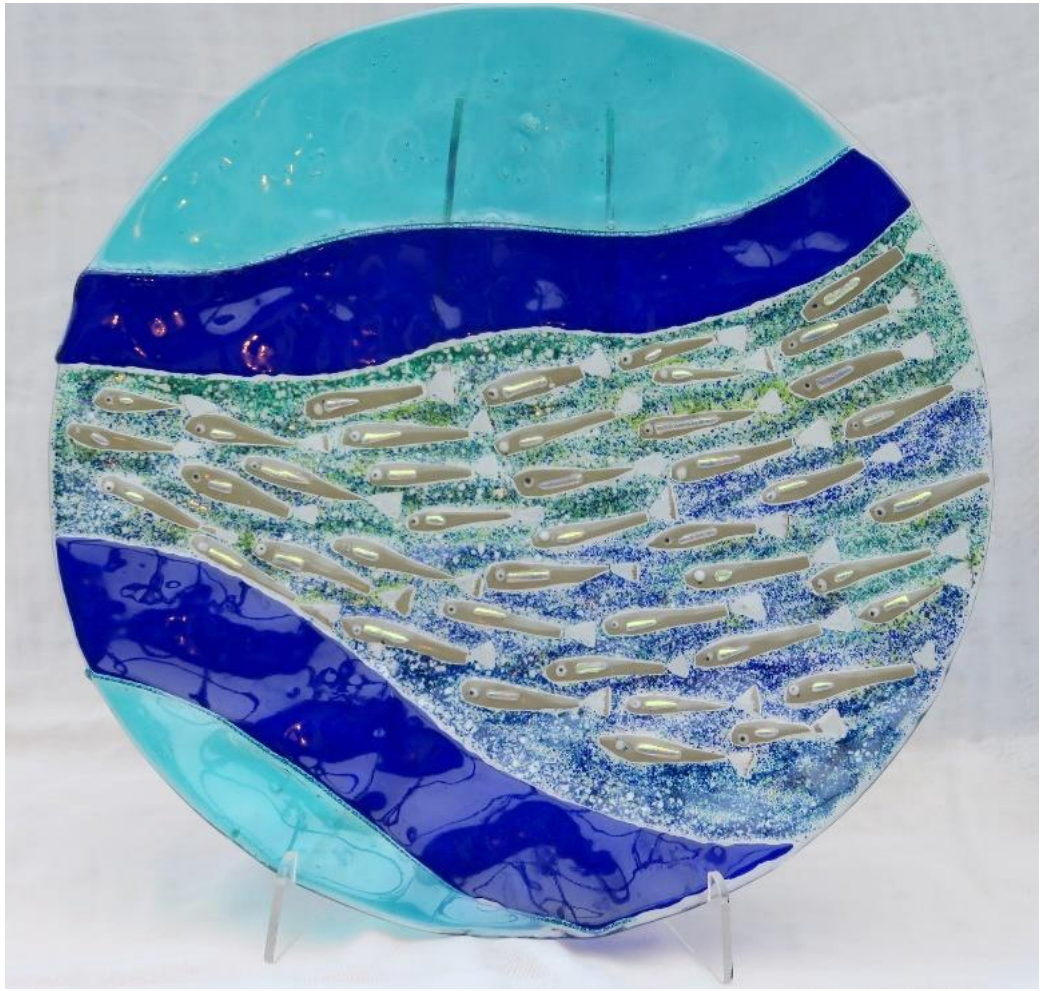
Dealfish are one of nine species of ribbon fish. They are generally found in the Atlantic Ocean and parts of the North Sea. They are a rare visitor to the British Isles and are sometimes found washed up on British beaches from the North Sea along with increasing amounts of seaborne trash. When large pieces of plastic disintegrate, they don't disappear. They become microplastics that are eaten by small fish which are themselves prey for larger fish. As predators feeding on small fish and squid, Dealfish also ingest marine litter despite living well below the surface at 200 - 500 metres depth. Besides marine litter entering the food chain, trash such as plastic nets can entangle and kill the fish.

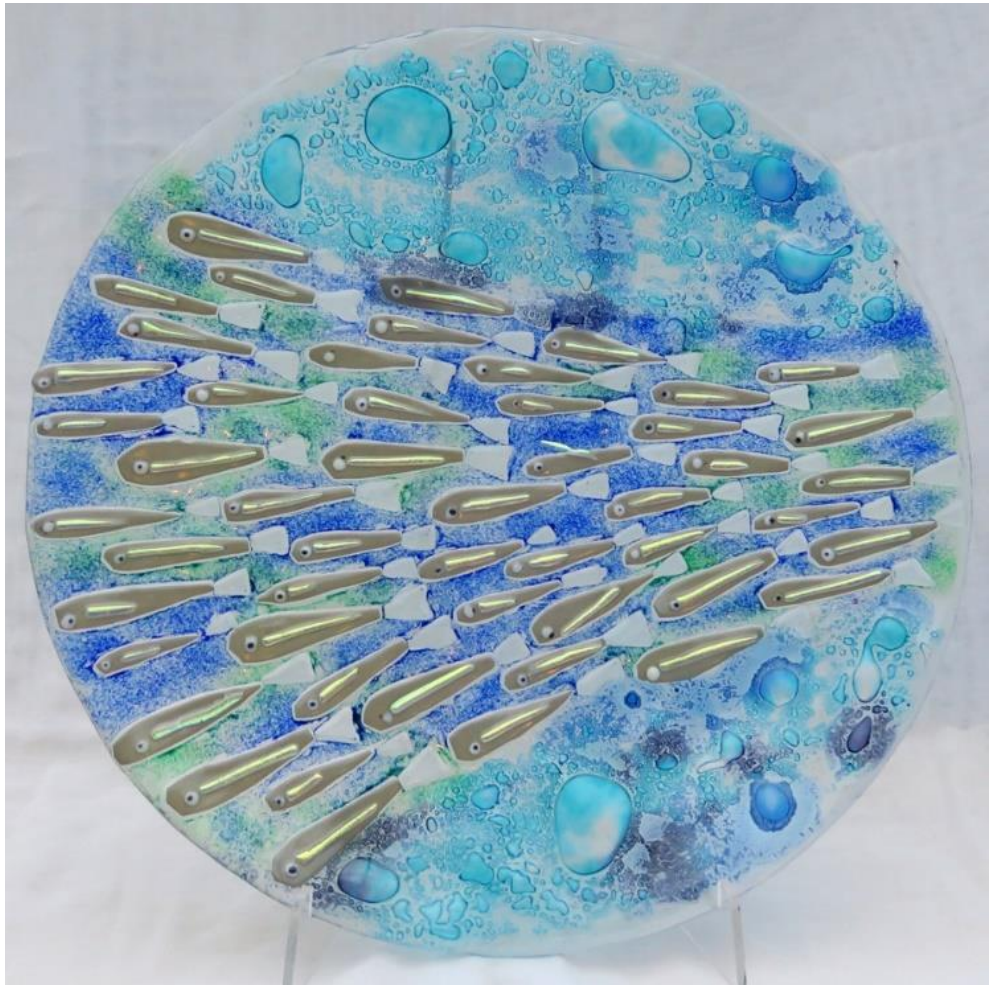
An average of 18,000 plastic particles are found on every square kilometre of the sea surface. Animals perceive the plastics as food. After ingestion plastic particles can damage and block the digestive organs which may cause internal injuries and death from starvation. Around 800 marine species are known to be negatively affected by contact with marine litter. The most obvious effects are ingestion of and entanglement in marine litter. The entanglement of marine life in litter items causes visible injuries which can be fatal, the effects of swallowing litter are often invisible.

To protect all marine life including *Trachipterus arcticus* and ultimately ourselves. We need to drastically reduce our use of plastics and prevent it from getting into the seas. My artwork is a representation in fused glass of the transparent *Trachipterus arcticus* with a range of genuine marine litter gathered from a British beach.

Fish #093 Blackbellied Angler *Lophius budegassa* Helen Green
Oil based ‘Polychromos’ pencils blended with a solvent 30 x 42 cm

Fish #095 Big-scale Sand Smelt, *Atherina boyeri,* Hazel Burnham
Fused glass 40 cm





These small, long and slender fish like to live in salt marshes, lagoons, inland waters and shallow water areas. A metallic, silvery colour, they have relatively large eyes to the body size. They are a scaly fish that feeds on small bottom living crustaceans, worms and molluscs as well as plankton. They are found around the coasts of England. It is used as sea bait and also eaten in some Mediterranean countries.

The Smelt

I see a little fish in the water,
Then another and another.
Suddenly I see a mass,
Darting, drifting, glinting.
Shining like jewels in dappled sunlight.

Fish #098 Atlantic Saury *Scomberesox saurus* Ingo Wilhelm Oil on canvas 40 x 50 cm

The Atlantic Saury

Needlefish, they call us
Needlenose, we sometimes hear
And yet, they do not know our numbers

We don't see them often
Out in their trawlers
Heard stories, but we don't live long to tell

Travelling - Our life
Temperature forces us

Wintertime, we wander
Morocco to Israel,
The Mediterranean, how swell

Summertime, we wander
Canada to Iceland,
Scotland to the Baltic

We grow fast, swim fast,
Populate along

Sometimes, we wonder
What might be further North
Up in the cold land

We heard they also like to roam
Travelling where it's warm
Populate a new home

Might see them soon in the North,
Migrating from the South

Like us,
Gregarious

Though frugal is our nature
Zooplankton, fish eggs or larvae
Basics satisfy our need

Needn't go deep
Under the surface we stay
To see the sky, we sometimes leap

The depths are dangerous
Enemies await

Beware of the tuna, as he is bad
The squid, you need to rid
And don’t trust the dolphin

We shall go on wander
In large school number
In our shiny silver skin

Wherever temperature takes us
Warmer and warmer
Wherever they decide for us

Fish #099 Mediterranean Flyingfish *Cheilopogon heterurus*

Sophie-Jane Edwards

Watercolour & fine liner 29 x 19.5 cm

The Mediterranean flying fish can be seen leaping out of subtropical waters; it is thought that they do this to escape their many predators. Their standard adult length is 28-30cm and they feed mainly on zooplankton.

The fish gains speed underwater of around 37mph, facing upwards it bats its tail to break the ocean’s surface and then spreads its wing like fins to glide through the air reaching heights of up to 4ft and distances of 650ft, it can then hit its tail off the ocean surface to hold momentum for longer distances.

Fish #099 Mediterranean Flyingfish, *Cheilopogon heterurus*, Molly Davies
Acrylics and ink 30 x 40 cm

My first interest in this fish was sparked by a BBC nature documentary, from my childhood I have been drawn to the sea and coast. In his early years my father worked for the Ministry of Fisheries in relation to the North Sea, and this connection brought the project to my attention.
Mediterranean flying fish grow to a maximum length of 40cm, they have been observed in oceans worldwide. They spawn during summer in the eastern Atlantic. They are preyed on by *Scombridea*, finfish and bony fish. They feed on zooplankton. Flying fish are not commercially exploited but it has been noted they are very tasty; they have been used in Japanese cuisine. The biggest threat to their existence is the pollution in the seas.
Flying fish actually glide rather than truly fly. They launch themselves into the air by beating the tail very fast and spreading their pectoral fins to use as wings. The extraordinary flying fish uses its fins and tail to glide up to 100 metres; this may be used as a means to escape danger. There are 52 different species of flying fish which are found in the Indian, Atlantic and Pacific Oceans (BBC, Nature, and Wildlife). The BBC nature news have documented evidence of flying fish fossils as far reaching as China.

Fish #099 Mediterranean Flyingfish *Cheilopogon heterurus* Raquela Task
Watercolour

Fish #099 Mediterranean Flyingfish *Cheilopogon heterurus* Evelyn Müller Acrylic, watercolour and Indian ink

To fly or to fall - A life on the edge

The water is whirled around as the hunters strike. Silver and blue shimmering fish shoot by through bubbles and chaos. The hunters are fast, the hunters are deadly. And their prey desperately tries to escape. The predators of the sea are close and the only chance of surviving is to go where they can't follow. And so the hunted go up, higher and higher, towards the sparkling light of the surface, and with one last thrust they break through. But instead of falling back into the deadly dark ocean, they fly. Hoping for a good breeze to take them away, more and more silver-blue fish jump into the air. Yet, they can't glide forever. And they are not alone, they are not safe. High above, the hunters of the air have been waiting for this moment. They strike when their prey enters their element. Again the only chance of surviving is to go where the hunters can't follow - and fall. It is a dance between water and air, between flying and falling, between two devils, where one mistake means death and one well timed manoeuvre means life.

These blue and silver coloured fish are called "Mediterranean Flyingfish". They live nearshore in the Northeast and Center of the Atlantic, Mediterranean and Black Sea and live on zooplankton. They are usually about 15cm long. Their predators are various fish from the Scombridae family and several maritime birds (and humans can eat them too). Technically they are not flying, but gliding, and can cover a distance of up to 200m and stay in the air for about 10 seconds. These beautiful fish, which are not limited to the water and have this amazing technique to escape their predators have always fascinated me. They may not be endangered now (listed as Least Concern), but climate change and pollution of the seas might change that. As an artist I absolutely love the idea of helping to preserve our earth by conveying its wonders through my art and really enjoyed working on my fish.

Fish #099 Mediterranean Flyingfish, *Cheilopogon heterurus*, Melanie Ford

Soft pastels and pastel pencils 29 x 42 cm

Cheilopogon heterurus, otherwise know as the Mediterranean flying fish, are unique as they are fish with the ability to fly. They are a pelagic coastal species, common length being 15cms but some males grow up to 40cms in length. Iridescent blue and silver grey in colour they truly are beautiful fish, and there are over 60 different species world-wide. Although they are currently not commercially exploited, there are many dangers from other predators, such as the Dorado fish and frigate birds. It is thought the fish evolved with the ability to fly to escape from predators. It takes great effort for the fish to take to the skies. They use thrust from their elongated tails to make them airborne and with a good wind can glide hundreds of meters. To keep them elevated they hit the waters surface with their tails. Spawning takes place in Italian waters. In the vast oceans it's hard to protect their young, so they look for a palm frond leaf or something similar to lay their eggs on. The male fertilises the eggs once the female has layed them on the palm frond. Once one fish spawns it attracts hundreds of other fish to lay there too and eventually the palm frond sinks to the ocean floor with the weight. There days later the young will hatch.

Fish #100 Three Spined Stickleback, *Gasterosteus aculeatus* Twink Addison Mixed media 20 x 15 cm

He gives the plant material and algae together with spiggen - produced from his kidneys

A spigg is a Swedish stickleback

SPIGGIN

He fascinates a female into his nest, fertilises her eggs, then shows her the door.

She might return - or he might dance another female in.

get in there girl

He looks after the eggs until they hatch, fanning with his fins to oxygenate them & sucking up & blowing out the ones that stray

When the fry are ready to leave, Dad might well expire with the effort of it all.

R·I·P

The marine Gasterosteus aculeatus or Saltwater 3-spined stickleback

This sea going tiddler is anadromous - coming inland from coastal waters and estuaries (in the Northern Hemisphere) - to breed in fresh water.

The 3 spined stickleback diaspora is very variable in its size and livery; the marine version is anything from 5cm - 11cm, with bony silver armour.

The stickleback is an aquatic lab rat, so information is abundant.

They eat plankton, fish, worms, crustaceans & sometimes even their own fry & eggs

yum yum

In Spring, the mature fish (2 or 3 years old) migrate to streams and ponds inland.

The Coast

Fresh Water

The territorial male, transformed by blue eyes and a scarlet abdomen, (the red doctor of our childhood) builds a nest.

the sharks

the jets

The juveniles make their way back to the coast, where they hang about in gangs in floating seaweed clumps.

keep your eyes peeled Beryl

When the adults aren't breeding they form shoals. Sometimes they go about in pairs, on the look-out for predators.

There seems to be no danger of extinction, well, only locally.

fin

Fish #101 Fifteenspined Stickleback *Spinachia spinachia* Laura Callaghan Grooms
Mixed media miniature on canvas 5 x 8 cm

The species characteristically has between 14-17 spines on its long, slender body. The male builds a nest of algal fragments, stuck together with a kidney secretion. The female lays 150-200 eggs in the nest and dies shortly after. The male tends the eggs and guards the nest.

Laura Callaghan Grooms is a mixed-media artist based in Brighton in the south of England. Cross-artforms and mixtures of media have been at the heart of her artistic output, and are particularly inspired by the natural world. Her artwork is inspired by the places she's been and the things she's seen and felt. Using a selection of collaged paper-based ephemera as the basis, she builds up mixed media, found objects and different varieties of paint, to create finished canvasses with delicate translucent layers. She takes inspiration from the natural world for her artworks and reflects her passion for recycling and reviving found objects, particularly those that would be otherwise overlooked. A particular focus of her current work is reuse of 'ghost gear' washed up on her local beach (any fishing equipment or fishing-related litter that has been abandoned, lost or otherwise discarded) which often entangles sea creatures with devastating effects. Her 'UNTANGLED' work was endorsed by Sir David Attenborough in 2016 as part of a World Cetacean Alliance programme. "Art has a powerful role to play in highlighting human responsibility for our natural world, and the imperative to protect and safeguard for the future".

Fish #102 Longspine Snipefish *Macroramphosus scolopax* Mark Loosemore Digital art 20 x 30 cm

An occasional visitor to the North Sea it occurs mainly in the Western Atlantic from the Gulf of Maine to Argentina and also in the Eastern Atlantic, Mediterranean and the Indo-West Pacific mostly in temperate latitudes. It will be found between the seabed and midwater on the lower continental shelf, over sand. Juveniles have been found in oceanic surface waters whereas adults normally live close to the bottom, normally in 50-350 m depth. The Longspine Snipefish otherwise known as Bellowfish or Trumpetfish is gregarious. Juveniles feed mainly on pelagic invertebrates, mainly copepods, while adults feed on bottom invertebrates. The juvenile snipefish is silvery with a bluish black back whereas the adult is reddish above and silvery below. Some variations in colour appear due to the highly reflective nature of the body which is free of scales but is nonetheless armoured. They reach a normal maximum size of about twenty three centimetres.

All the names by which this fish is known obviously relate to the extensive spine on the dorsal fin not clearly shown in the illustration but which can be erected as with all dorsal fins if needed to defend against predators. The reference to bellows and trumpets are clearly evident in the extensive snout. As with all sea-life the threat posed to the Snipefish by pollution is all too real and even bottom feeders in the depths of our oceans are not exempt from this potentially damaging situation. It is therefore vitally important that all countries address the problem before it becomes irreversible.

Fish #102 Longspine Snipefish *Macroramphosus scolopax*
Sheila Rudling
Watercolour 14 x 23 cm

This fish is a species that is in abundance. They are found in large schools and their habitat ranges widely from the Pacific and Indian Oceans to the Mediterranean to the Atlantic Ocean. They are normally found a depths of 50 - 350 metres but have been found at a depth of 600 metres. It is found in many fishery zones and is therefore taken as a by catch. They feed on zooplankton. They grow to a length of 20cm (7.9 ins) and have a silver and reddish colour.

Fish #103 Snake Pipefish *Entelurus aequoreus* Debby Mason

Asia Shoal is a popular dive site situated on the northern side of Drake's Island which lies directly at the mouth of the River Tamar in Plymouth Sound. The depth ranges from 5 to 18 metres, with a mainly sandy seabed with some rocky outcrops providing habitat for a wide variety of marine life including sponges, crabs, cuttlefish, scallops and flat fish. I was diving there and had just stopped to observe a Cuttlefish which was performing its spectacular colour changes when a Snake Pipefish curiously approached me and took an interest in my air hose - it curled itself around. It stayed there for several minutes until my buddy gently removed it and we continued our dive.

From watching Jacques Cousteau's 'Silent World' as a child and family holidays rock pooling and crabbing in Cornwall, the sea has been a constant fascination and source of inspiration. Books such as Jules Verne's '20,000 Leagues under the Sea' with his vivid descriptions of strange marine life; the evocative and truly mystical names of species, Sea Dragons, Nautilus, Argonaut and Fangtooth, you wonder if they really exist.

My drawings are taken from life, either caught on fishing or diving trips, from aquariums and from Plymouth Fish Market. A recent departure was a series of etchings of plankton drawn from looking through a microscope at the Marine Biological Association, quite a challenge! This felt like a natural progression to the series of the true giants of the sea, Whales that I have been working on, inspired by a trip to the Azores.

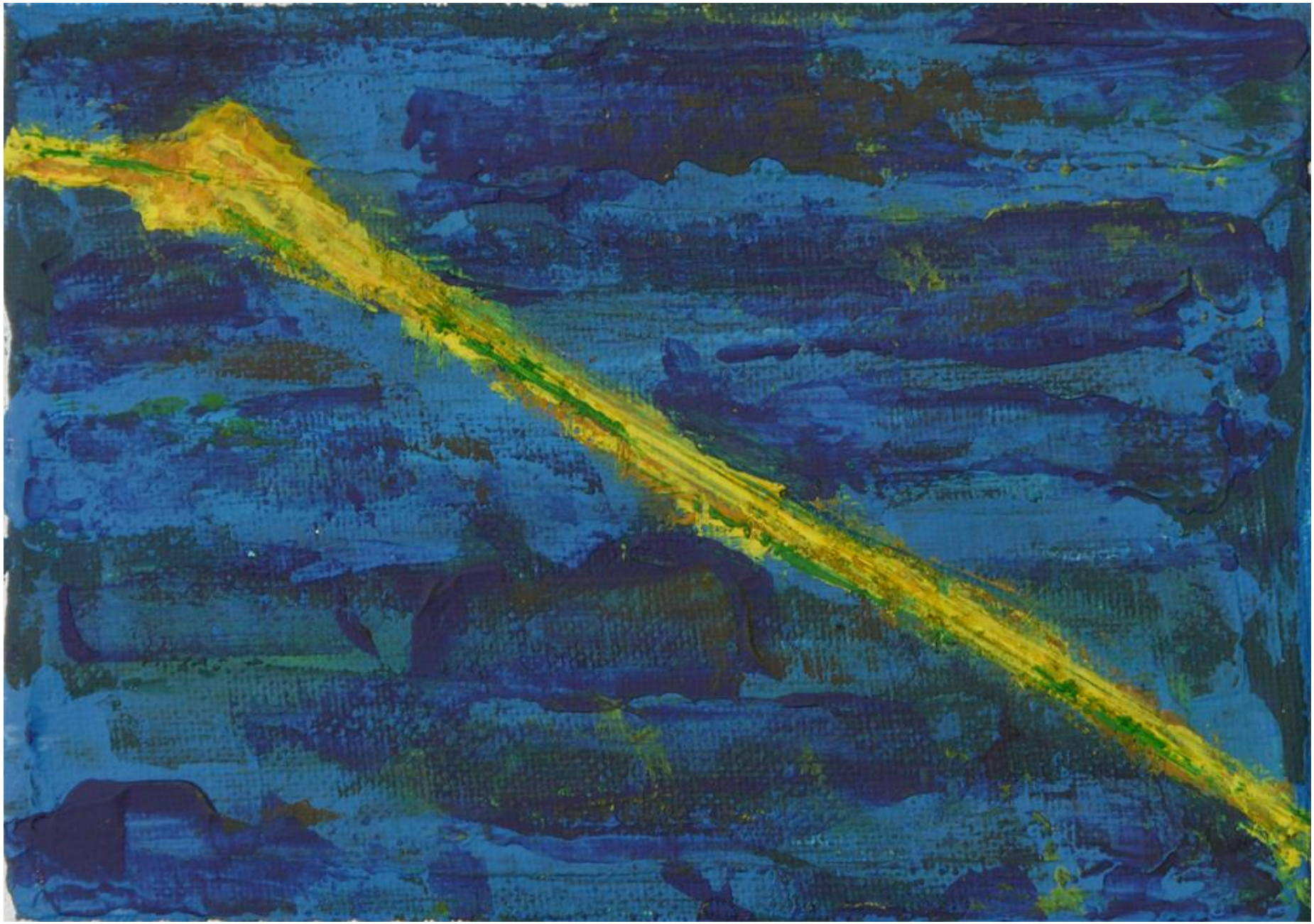
More unusual creatures are from the Natural History Museum in London, a wonderful resource and I feel it is such a privilege to work in a place where incredible discoveries lie and where more are constantly being found. This for me reinforces and completes the connection between my ideas and reality.

Fish #104 Worm Pipefish *Nerophis lumbriciformis* Rachel Shaw

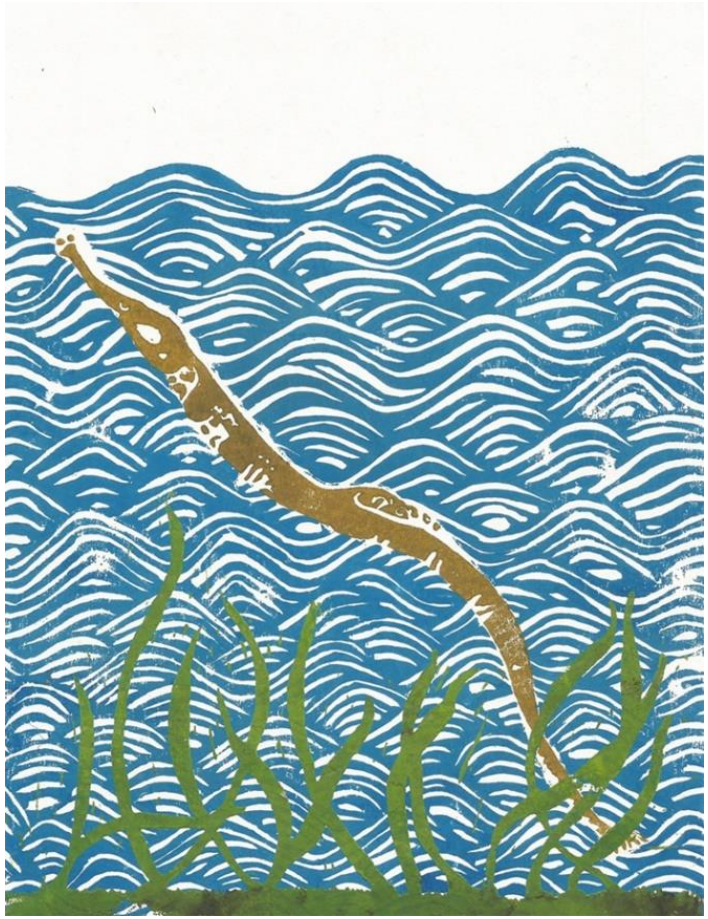
Collage of paper and card painted with acrylics 21 x 31 cm

Though more common on the west coast, hiding amongst the seaweed in the rockpools of the North Sea coast could be this relative of the seahorse. The worm pipefish has a similar upturned snout to a seahorse and exhibits similar behaviour with the parental duties being undertaken by the males. Females are larger, more colourful and more active than males. After courtship and mating, the female transfers about 150 eggs into a shallow groove on the male's belly. The male protects the eggs until they hatch as free-swimming baby pipefish and drift away in the current. Here, the males parental responsibilities end. As breeding is correlated with seawater temperatures below 15.5Â°C, these fish are likely to be susceptible to changes in ocean temperatures. Extreme site fidelity and homing behaviour has also been documented in worm pipefish so they are perhaps unlikely to respond well to change. Worm pipefish grow to about 15cm long.

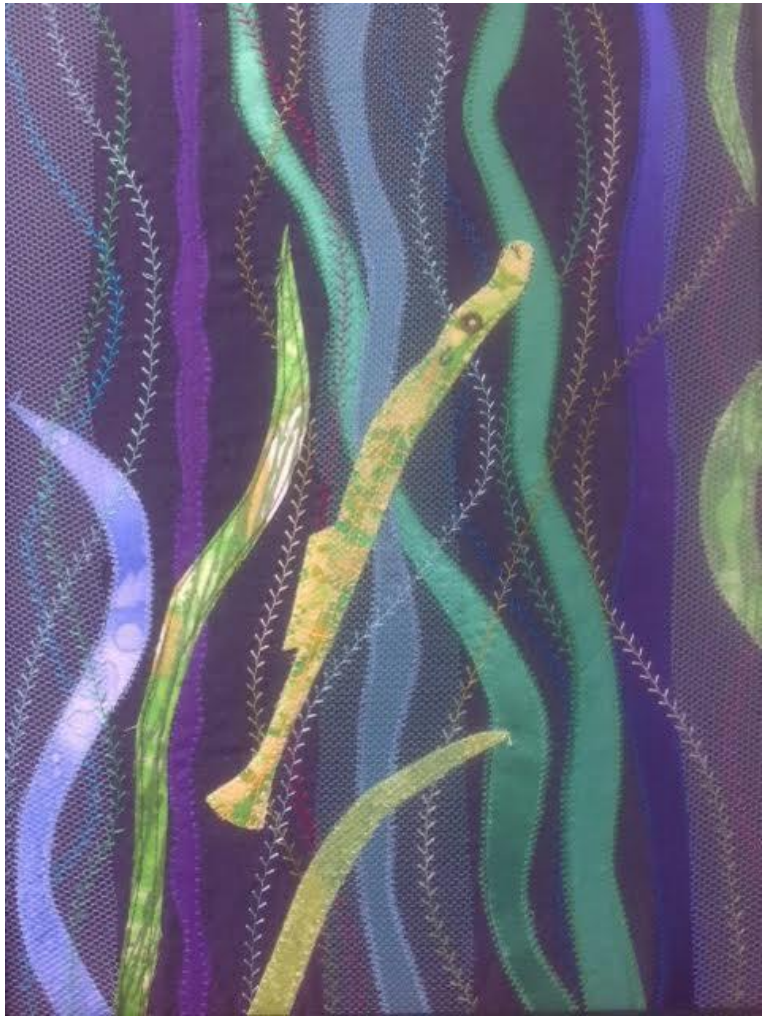
Fish #105 Straightnose Pipefish *Nerophis ophidion* Roxy Warrick Acrylic on canvas 13 x 18 cm



Fish #107 Lesser Pipefish *Syngnathus rostellatus* Hazel Owens Lino print 29 x 20cm



Around the UK's shores, in shallow, sandy areas, amongst the sea weed and grasses you may find the Lesser Pipefish *Syngnathus rostellatus*. This green/brown relative of the seahorse has no scales, nor a crest on it's head. Instead they have bony plates along their bodies, and a dorsal, caudal and pectoral fins. They thrive in warmer waters, and breed in the spring/summer months. Just as with their relatives, the eggs are carried by the males until they can fend for themselves.
There are no current concerns for the population of the Lesser Pipefish, their population is affected somewhat by temperature changes and the salinity of the water they live in. They say that this fish has no commercial use, so there is minimal amount of data collected, however it seems that the Lesser Pipefish lives in relative peace as far as we know.



Fish #108 Broadnosed Pipefish
Syngnathus typhle Emily Jennings
Textile 33 x 25 cm

The Broadnosed Pipefish is a member of the *Syngnathidae* family, which includes pipefish and seahorses. It is hexagonal in cross section and instead of scales, has small bony plates. It is a mottled green with a yellow belly, has a fan shaped caudal fin, and a flattened snout. The average broad nosed pipefish is about 20cm long.
Like sea horses, the usual male/female roles are reversed during reproduction. Both sexes compete to attract a mate, and when chosen, the pair perform a ritualised dance. The female then deposits eggs in the male's pouch, where they are fertilised by the male, and gestate for about 4 weeks. Broadnosed Pipefish mate with multiple partners in a season, and a male may have eggs from several females in his pouch at the same time. Once the eggs hatch, the male provides all the care for the fry, whom also continue to use the pouch as a safe haven. Their average lifespan is three years. Broadnosed Pipefish feed on plankton and small crustaceans, which they suck into their snout. They like to rest in a vertical posture camouflaged amongst the seaweed, hiding from predators and prey alike. The loss of sea grass meadows and other shallow water habitats therefore impacts the species.

Fish #109 Short-snouted Seahorse *Hippocampus hippocampus* Janet Bennetts Watercolour 42 x 30 cm

"Hippocampus" comes from the Ancient Greek word 'hippos' meaning 'horse' and 'kampos' which means 'sea monster'. The Short-snouted Seahorse, *Hippocampus hippocampus*, is a species of seahorse in the family Syngnathidae. It is actually a fish, related to pipefishes, although instead of having scales like most fish, it has a bone structure that is made up of little plates covered with a thin layer of skin. The seahorse is the only fish with a neck and the only species on Earth in which the male gives birth. They are able to change colour like chameleons. I was surprised to find out that seahorses could be found in the North Sea but apparently they do sometimes venture into the southern North Sea - more frequently as temperatures rise. More usually they are found in the Mediterranean Sea and parts of the North Atlantic, particularly around Italy and the Canary Islands. In 2007, colonies of the species were discovered in the River Thames around London and Southend-on-Sea.

Adults can grow up to 15cm. They are thought to live for 3-5 years. They are usually found in seaweed and seagrass beds in shallower waters. The seahorse mimics the green or yellow coloration of plants allowing it to hide among the vegetation. This ability likely plays a role in seahorse feeding strategy and in predator avoidance. It makes limited daily movements within very restricted home ranges. It may over-winter in deeper water. Adult dispersal over large distances is probably caused by strong wave action during storms or when it anchors itself to floating debris. They blend invisibly into the background and, using their short snouts, they suck up plankton such as copepods and other small crustaceans like a vacuum cleaner. They are incredibly stealthy and their chameleon-like eyes can move independently of one another, allowing them excellent vision. They use their prehensile tails to anchor themselves to plants.

They are ovoviviparous, which means that the male carries the eggs and gives birth after the female deposits eggs into the male brood pouch. Newly hatched young are thought to have a planktonic stage that lasts at least eight weeks. During the mating season, mature males and females have been observed to change hue, i.e., become brighter, when greeting, courting, or mating. They are faithful to their partners - although not necessarily for life.

In the United Kingdom they are protected under the Wildlife and Countryside Act of 1981. In 2010, the London Zoo, which operates a Short-snouted Seahorse breeding programme, saw the birth of 918 baby seahorses. Due to the small size and vulnerability of the seahorse, it has numerous predators within its natural environment. Crustaceans such as crabs, fish and rays are all common predators of the seahorse along with humans who harvest the seahorse for use in traditional medicine. The seahorse is also vulnerable to bad weather as in storms seahorses are often thrown from the place that they were clinging to and onto the shore.

HIPPOKAMPOI (Hippocamps) were the fish-tailed horses of the sea. They were depicted as creatures with the head and fore-parts of a horse and the serpentine-tail of a fish. Hippokampoi were the mounts of Nereid nymphs and sea-gods, and Poseidon drove a chariot drawn by two or four of the creatures. The Ancient Greeks and Romans believed the seahorse was an attribute of the sea god Neptune/Poseidon and as such, the seahorse was considered a symbol of strength and power. Chinese cultures believed that the seahorse was a type of sea dragon; they were revered for their power and thought to be symbols of good luck. Unfortunately this has led to seahorses being used in traditional medicine.

Short-snouted Seahorse

I am a little seahorse
With a short snout
I drift amongst the weeds
In and out
Carried by the tide
I change my colour
So I can easily hide
And hang on by my tail
In the event of a gale
I'm the oddest creature you could wish
I'm not a horse of course but a fish!

Fish #111 Armed Bullhead *Agonus cataphractus* Barbara Melling Batik on Cotton 40 x 50 cm

Commonly known as the Hooknose, Pogge or Armed Bullhead, this is a species of fish in the *Agonidae* family, close to the Scorpion Fish. It is the only species of the genus *Agonus*. The Armed Bullhead is characterized by being covered in hard, bony plates in paired rows covering the whole breast and limiting the flexibility of its body. The snout has a pair of strong spiny hooks and numerous barbels (slender, whisker-like sensory organs) near the mouth, beneath a flattened head. It reaches up to 21 centimetres (8.3in) in length, but is typically found at sizes of 10-15 centimetres (3.9-5.9in).

Preferring sandy bottoms, rarely with stones, the Armed Bullhead is found in the coastal seas of the British Isles, Norway, the Faeroes and the North Sea and lives at depths between 2 and 20 metres, although it migrates to waters down to 270m in winter. Armed Bullheads feed on small crustaceans, molluscs, brittle stars and worms. They spawn from February to May in the base of seaweed, the eggs taking a long time to hatch, 10 to 11 months. Very little else is known about the biology of this species.

I am a textile artist working mainly in batik techniques, using hot wax resist and dyes on fabric. I chose this fish because I love the shape and textures it has, with its covering of hard armour and its whiskers. I also like the slight air of mystery it has, living on the bottom of the sea bed and little being known of its habits.

Fish #112 Atlantic Hookear Sculpin, *Artediellus atlanticus*, Simon Wardell Graphite pencil 34 x 44 cm

The Atlantic Hookear Sculpin is a relatively rare find in the North Sea with recorded instances being around the Orkney Islands. It is more commonly found in the North West and North Eastern areas of the Atlantic Ocean. It belongs to the Sculpin (Cottidae) family of Scorpionfish (*Scorpaeniformes*) and like many of this order are excellently camouflaged allowing them to wait patiently for food to come close and then darting quickly forward and capturing its prey, small molluscs and occasionally small crustaceans in its mouth. It is a small fish, typically between six and ten centimetres in length with larger recorded specimens being up to fifteen centimetres. They live singly at depths of up to nine hundred metres on sandy or muddy sea beds.

Fish #112 Atlantic Hookear Sculpin *Artediellus atlanticus* Leanne Smith

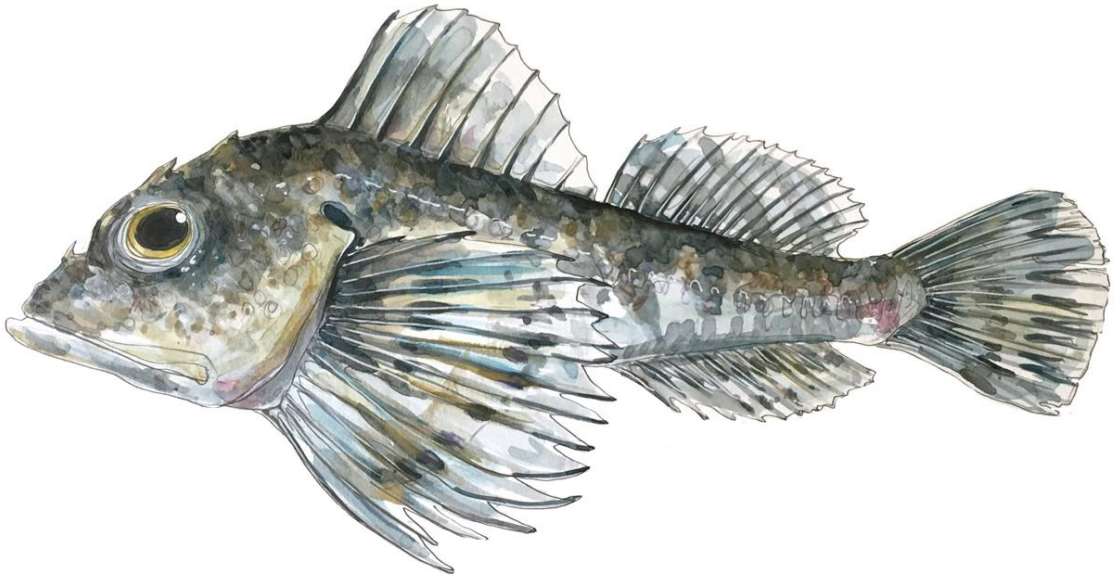
Acrylic 60 x 75 cm

This is my interpretation of the Atlantic Hookear Sculpin. An almost monstrous looking creature whose appearance enticed me into creating this piece of work. This beautiful creature has been described as rare in the North Sea. Found at depths of up to 900 meters they are widespread across North West & North East Atlantic. At a length of 10.5cm they are found on the bottom of the ocean in deep waters feasting on polychaetes, small molluscs and very rarely small crustaceans.

The Atlantic Hookear Sculpin is not harmless to humans although can be confused with the scorpion fish which also has poisonous spines. Sadly they are commonly discovered in trawl nets although no major threats to this species have been identified. Its threat status is listed as Least Concern but may be susceptible to impacts from climate change.

Fish #113 Twohorn sculpin *Icelus bicornis* Ali Elly

Watercolour on paper 31 x 41 cm



The Twohorn sculpin is a small fish typically 5-12 cm long and may reach 15 cm. It has a relatively large head, mouth and eyes, and a body that tapers rapidly from a wide head to a thin caudal peduncle. One sharp spine is located in front of each eye and two spines behind. Like other sculpins, the Twohorn has two dorsal fins - the first is spiny, while the second is soft rayed. Twohorn sculpins also possess the large, fan-shaped pectoral fins that are characteristic of all sculpins. The caudal fin is only slightly rounded and has dark, vertical bars and a black spot at the base. The body colour is yellowish, with many dark blotches on the back and sides. They have no value and are not generally considered tasty. Like all sculpins, the adults are sluggish bottom-dwelling fish.

Fish #115 Norway Bullhead *Micrenophrys lilljeborgii* Maria Carbin

Ink and acrylic paint 19 x 23 cm

M. lilljeborgii is a type of scorpionfish, identified by a row of bony knobs above the lateral line. Reaching around just 6 cm in length, it eats small crustaceans like amphipods and decapods, and fishes. Spawning in early spring its demersal eggs are just 2 mm long.

The Norway Bullhead is a widespread fish; found around the northeast Atlantic (sometimes in areas colder than 0°C!) from southwest Scandinavia to Icelandic waters. Though despite its range *M.lilljeborgii* isn't a common fish, or a well-documented one. It resides on gravelly substrates where trawlers cannot fish, so it's rarely caught too. This made it a bit of a challenge to gather reference material (a quick google image search of the Norway Bullhead shows a lot of different, but very similar looking sculpins, or some of poor image quality), so I hope any demersal fish biologists out there could forgive any inaccuracies!

Fish # 117 Lumpsucker *Cyclopterus lumpus* Laura Callaghan Grooms Mixed media on canvas 15 x 15 cm

Also known as the Sea Hen, Lumpfish, or Henfish, the Lumpsucker feeds on a range of works, prawns and small fish. Their ventral fins join together to form a disc which acts as a sucker, meaning that it can attach itself to rocks.

Laura Callaghan Grooms is a mixed-media artist based in Brighton in the south of England. A particular focus of her current work is reuse of 'ghost gear' washed up on her local beach (any fishing equipment or fishing-related litter that has been abandoned, lost or otherwise discarded) which often entangles sea creatures with devastating effects. Her 'UNTANGLED' work was endorsed by Sir David Attenborough in 2016 as part of a World Cetacean Alliance programme. "Art has a powerful role to play in highlighting human responsibility for our natural world, and the imperative to protect and safeguard for the future".

Fish #117 Lumpsucker *Cyclopterus lumpus*
Tim Barnes

Fish #118 Red Gurnard, *Aspitrigla cuculus*, Fiona Carruthers Non-recyclable plastic, plastic bags, recycled wire, recycled packaging tape and dressmakers pins. 15 x 20 x 40 cm

The red gurnard is usually found in shallow, inshore waters. It has a tapering cylindrical body, a high broad head, a large triangular dorsal fin, a long second dorsal and anal fin, and large pectoral fins. Other features, which are quite unique, result in these fish sometimes being described as 'walking', 'talking' and/or 'flying'. The gurnard has six spiny feelers which allow it to 'walk' along the seabed in search of small crustaceans and other invertebrates that it might eat. It will also hunt sprats, sand-eels, small mackerel and herring. Their beautiful pectoral fins can look like a set of 'wings'. They allow the fish to 'fly' through the water which has led to the gurnard species sometimes being known as 'sea robins'. The gurnard is also sometimes known as 'the croaker' as it can make a croaking or grunting noise by drumming a muscle against its swim bladder. The fish are thought to fend off predators in this way as well as to communicate with each other. Like a sturgeon, this fish has special armoured plates instead of scales. On the gill plates and dorsal fins there are sharp spines which are a useful defence against predators.

Red gurnard generally grow to around 30cm in length with a one pound fish being a decent catch from the shore. They are often reddish in colour, although sometimes brownish. They are easily confused with the tub gurnard, as sometimes a tub gurnard can be redder than a red gurnard! The pectoral fins are therefore the best way of identifying this species - if blue is present on these fins it is a tub gurnard, if no blue is present then it is a red gurnard.

Despite its odd appearance the red gurnard is tasty and full of firm meat which has the health benefits of whitefish. Oddly, for a species that has no tradition for eating in the United Kingdom, the red gurnard has several local names, including 'soldier', 'elleck and 'rotchet as well as 'croaker'. Currently, there is no minimum landing size and no quotas for the gurnard in the European Union and stocks are deemed to be stable.

I was initially attracted to this fish because of its dazzling colours of reds, oranges and pinks. Also because of its hypnotic eyes and oversized, bulky, armoured head. I was, however, also astonished and quickly fascinated by its surprising and impressive set of un-fish like features! I grew up on the Lincolnshire coast and continue to live and work here as an artist.

#119 Tub Gurnard, *Chelidonichthys lucerna*, Fiona Carruthers

Non-recyclable plastic, plastic bags, recycled wire, recycled packaging tape and dressmakers pins

15 x 20 x 40cm

Easily confused with the red gurnard, as sometimes a tub gurnard can be redder than a red gurnard! The pectoral fins are therefore the best way of identifying this species - if blue is present on these fins it is a tub gurnard, if no blue is present then it is a red gurnard.

I am passionate about our beautiful landscape and coastline and hope to convey something of the glory of our surroundings as well as the instability and fragility of the environment and our times. I chose to use non-recyclable packaging and recycled materials for this project to help make visible the connection between our daily lives and environmental concerns.

Fish #120 Grey Gurnard, *Eutrigla gurnardus,* David Armitage Steel, brass, copper and glass length 60 cm

Also known as: Mail-cheeked fish, Cuckoo fish, knoud, or noud (Ireland), Feeler fish, Croaker.

Etymology of Gurnard: From Old French gournart, from the verb gronir, from Latin grunnÄ«re (to grunt).

Length:- between 30 cm and 60 cm (the smallest of the gurnards)

Weight:- 0.6kg average

Shape:- high broad head, tapering cylindrical body

Colour:- ranges from dark grey to greyish-brown (sometimes nearly black) with small whitish-cream spots on the back and flanks fading to a pale underbelly

Sound:- able to croak or grunt using a muscle which is drummed against the swim bladder

Lifespan:- more than 15 years

Habitat: Semi pelagic, demersal, feeds in benthic zone

Sustainability: Populations are relatively robust. Currently promoted as a sustainable fish to eat.

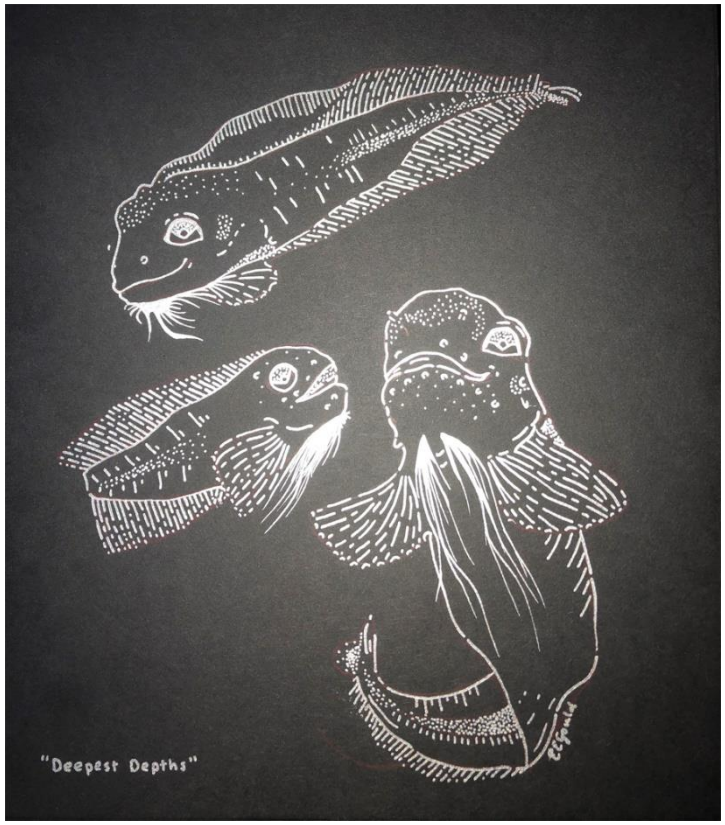
sea floor sandy smooth
the hungry hunter glides by
small fish scattering

Fish #121 Piper Gurnard *Trigla lyra* Sue Ford
Textile 15 x 31cm

Fish #122 Streaked Gurnard, *Trigloporus lastoviza* Bob Armstrong Water based mixed media using inks, acrylic, collage and gum Arabic. 25 x 43 cm

The Streaked Gurnard, *Trigloporus lastoviza* (syn. *Chelidonichthys lastoviza*) is the only member of *Trigloporus,* a species of Searobin, found in the Eastern Atlantic to the Indian Ocean, from Norway to Mozambique, but is a very rare visitor to the North Sea. It is found at depths of up to 150 metres but usually in more shallow water from 10 to 40 metres deep. Maximum length is approximately 40 cm. It feeds exclusively on small crustaceans such as swimming crabs which it can detect under the sand or mud with specially adapted spines used as feelers.

Apart from their striking good looks the Gurnards are a multi-talented bunch. They are known as Searobins for their red colour and large pectoral fins that move with a flying motion. The feeding sensors resemble legs, giving the appearance of walking, and they are to communicate with each other in two ways. Gurnard in French means grunt and by using a muscle against its swim bladder it can, indeed, make a croaking or grunting sound and the blue spots on the pectoral fins will light up when the fish is aroused. Oh yes, they swim quite well too!



Fish #123 Sea Tadpole *Careproctus reinhardti* Emily Gould (age 13) Silver gel pen on black card 22 x 21 cm

The sea tadpole, or *Careproctus reinhardti*, lives on muddy sea bottoms, with a maximum reported depth of 1750 metres, but ranging from 75 metres. It is part of the *Liparidae* family, also known as snailfishes. They feed on benthic and pelagic crustaceans and fish. The female sea tadpole lays approximately 300 eggs at a time, each with a diameter of 4.5 millimetres. The sea tadpoles are distributed mainly around the Kara and Laptev seas in the Arctic, but are also found in the Atlantic, near Iceland and Greenland, and of course, the North Sea. The maximum length of the sea tadpole is 30 centimetres, and it is described scientifically as having around 53 dorsal soft rays, 59 vertebrae, simple teeth, large gill slit reaching below the base of the lower lobe of the pectoral fin, having one nostril either side of the mouth and being a pinkish orange in colouration. It was first found and logged in 1862.

Fish #124 Common Seasnail *Liparis liparis* Marcelle Seabourne
Acrylic on foil collage 22 x 17 cm

Liparis Liparis - English names: Common Seasnail, Striped Seasnail, Ringbug or just plain Sea-snail. The Common Seasnail is, of course, not a snail at all, but an unusual-looking fish with a large front part of the body and a flattened tail end. It has a bony head with two pairs of nostrils on its snout. It has large pectoral fins which join beneath its body and a pelvic fin in the form of a large sucking disc. Living for about three years, the Seasnail grows to between 8cm and 14cm long. It lives on the seabed, from the shallow, sub-tidal zone to depths of 300m, feeding on small crustaceans such as shrimps or crabs, polychaete worms and small fish.
Despite being quite common, few people have seen a sea snail, as it is rarely caught in nets or traps, though it may attach itself to the weights and floats of nets. The near-shore habitat of the common Seasnail has been impacted by pollution discharges, such as sewage and industrial waste, over much of the last century or more. However, this species has a good recovery record and effects are thought to be localised, so the presence of Seasnails may indicate a cleaner marine environment. I made this image of a common Seasnail from a piece of aluminium foil (pre-used in the kitchen), using acrylic paint for the surface markings and then adding a monoprint background.

Montagu's Seasnail

In a cold rockpool, close to the shore
The morning sun sits within a body of scales
Shining brightly within a solar system of anenomies and weed
And meteors of crustaceans with flicking tails

The vibrant orange morning sun
Seeks small isopods on which to feed
Sucking at algae and dead rock
Building energy for when it breeds.

Unlike the stars in the sky itself
This small sun's birth is not within the clouds of space
But on a humble patch of ocean plant
Without extravagant explosions or grace.

For the Montagu's Seasnail, The tadpole sun
Its body small, bright and wide
The very size of the universe itself
Depends on the coming and going of the tide.

Fish #125 Montagu's Seasnail *Liparis montagui* Charlotte O'Neill.
Acrylic 21 x 29 cm

Fish #125 Montagu's Seasnail *Liparis montagui* Sophie Morgan

Fish #126 Blackbelly Rosefish *Helicolenus dactylopterus* Sylvia Causer

Watercolour and acrylic ink Fishy Tales 1: 29 x 21 cm. Fishy Tales 2: 21 x 29 cm.

Let me introduce you to Blackbelly rosefish or, to use its Sunday name - *Helicolenus dactylopterus*. With a name evoking images of pirates, this fish's behaviour includes threatening and dastardly deeds similar to that of a marauder...Shiver me timbers! Typically, it is a sit-and-wait predator with a highly cryptic colouration. A versatile fish, hovering at depths between 50 and 1,100m, it is usually found in a range of 150 to 600m. It can be found patrolling the western seas from Nova Scotia to Venezuela and in the east, from Iceland to South Africa including the entire Mediterranean Sea. Depending on availability, it feasts on crustaceans, fishes, squid and sometimes, worms and sea urchins. Obviously, it can only tackle prey smaller than itself, but it is nonetheless, ruthless in its pursuits. Spines are its armaments, and as with other species of scorpionfish, they contain toxic venom capable of injuries to humans but little is known of its particular brand of poison. An arsenal of spines possibly contributes to its longevity, a whopping 43 years, and with an average length of 25 cm, a feisty fish for one so small. Blackbelly rosefish is the most commercial of the scorpion species in the Mediterranean, and due to a depletion of traditional resources, it is fast becoming a bycatch fish with important economic value. I understand it's quite tasty too.

Blackbelly rosefish called to me initially because of its name, and on discovering its beautiful form, pink colouration and, its audacious character, I was hooked. As an artist, Pink is a big part of my life; I am a performance artist in a duo called Pink and grAy, I'm often dressed in pink, and whenever there is an opportunity to paint in hues of my favourite colour, I'm first in the queue!

Fish #126 Blackbelly Rosefish *Helicolenus dactylopterus* Suzanne Barratt

Acrylic, ink and digital media 21 x 29 cm.

Despite the fact that many people say this fish is ugly, I think it's very cool and also rather quirky! For starters you can't tell from simply looking at it, but the blackbelly rosefish is named for its belly. On the outside the belly of the fish looks like the rest of its body, but the internal lining of its belly is black. It also goes by the name of a Bluemouth because (you've guessed it!), the inside of its mouth is blue and redfish because, well, that hardly needs explaining.

This is one of the most common bony fishes on the continental slope where its cryptic colouration is perfect for a 'sit and wait' feeding behaviour. It has no swim bladder so with this fish it really is a case of 'sink or swim' and deep soft sea bottoms are the ideal place for them to stand on their pectoral fins and wait for a juicy morsel to come their way. When it does, the attack is speedy and violent. The blackbelly rosefish is a type of scorpionfish and is armed with bony spines covered in venomous mucus. It can live to be 40 years old, and it has an interesting breeding talent. After breeding the female blackbelly rosefish can store sperm within her ovaries to delay egg fertilization and even spawn multiple batches of young after a single mating event. Now, that is rather neat don't you think? And, should you ever catch one and decide to cook it, it's rumoured to be very tasty.

I was inspired to paint this particular fish as I love colour and have always been fascinated by marine life. I spent most of my teenage years in Plymouth or on the South Devon coast and took a degree in zoology which gave me lots of opportunities to study marine life. I gave up art at school to follow the sciences but came back to it later in life. I'm merely an amateur but I do so enjoy it!

I am largely self-taught and work in a variety of mediums although I always seem to come back to my first love of watercolour, without or without pen. Lucky for you then that I can't intellectualise about my art, I don't have complex reasons for doing it, and I often don't know why I paint a certain subject except it appeals to me at the time. As you can tell I like bright colours and, possibly because I started out as a biologist, I like the natural form although I also enjoy drawing and painting buildings. For most of my working life I taught science but rediscovered my love of drawing and painting in later life.

Fish #126 Blackbelly Rosefish *Helicolenus dactylopterus* Janet Howe
Watercolour 24 by 30 cm

The Blackbelly Rosefish usually lives between 150 and 600m down, in the Atlantic Ocean from Norway to the Azores and between Canada and South Africa, which includes the North Sea. As an adult it is usually about 25 cm long and examples have been found up to 43 years old. It is a bony fish with 12 dorsal spines and 3 anal ones and a pectoral fin. It is orange-pinkish in colour, brighter at the top and paler underneath, with darker markings in the form of bands and blotches. It generally lives at the bottom of the ocean on the continental shelf and so feeds on crustaceans, fishes, cephalopods and echinoderms.

I was intrigued to read it described as 'a sit and wait' predator which conjured visions of my fish lurking in the depths until something tasty passed by. I think its name comes from the dark colour of its insides - but what really attracted me was its vibrant exterior, not something I expected in a North Sea fish. It has a venom gland and its spines have caused injury to humans so we would be well advised to leave it to enjoy its life in peace!

Fish #127 Deepwater Redfish *Sebastes mentella* Doreen Moore Textile 38 x 64 cm

Sebastes = venerable or august

Common names - Deepwater Rosefish, Beaked Redfish and Atlantic Ocean Perch

This aptly named fish, which lives much of the time in the deep water in the northern reaches of the North Sea, is a vibrant red colour. Its other common names reflect the rose colouration and the bony protrusion (beak) on its lower jaw. It has bony spines covering its gills and a 14 spiked dorsal fin. Its big eyes are a necessity for living in the deep. *Sabastes mentella* can grow up to 60cm (2feet) in length and live for up to 75 years. It reaches maturity only after 10 - 15 years. This late maturing leads to the possibility of it becoming an endangered species, especially as they only have young every 5 - 12 years. In shrimp fisheries, in Canadian waters, bycatch (incidental harvesting) has occurred in the past but has now been reduced by the introduction of separator gates in trawls. It is currently of least concern status.

Rest deep down by day,
Rise above at night to feast.
Redfish shoal's commute.

Deepwater Redfish are ovoviviparous. Fertilisation of the eggs takes place within the female when mating occurs in autumn. The eggs then hatch and develop into larvae inside the female, who gives live birth in spring. The larvae live in the surface waters up to 30m down. Here the larvae feed on marine plankton and fish eggs until they reach 25mm when they gradually migrate to deeper water. During the day the adult Deepwater Redfish dwell on the bottom of the sea, but during the night they rise up off the bottom to feed on crustaceans and smaller fish and shrimp. They are in turn the prey of halibut, cod, swordfish and US, being commercially fished in the North Atlantic. Its range covers all the waters of the North Atlantic over to Canadian waters. They are a common fish north of Orkney and fairly common in the open seas off Norway.

Whilst snorkelling on the Australian Great Barrier and Ningaloo Reefs, and also in Fijian and Samoan waters we saw many wondrous fish, sea creatures and corals but the Deepwater Redfish of the North Sea is up there with the greatest. It's a pity that the waters are too cold for most people to see at first hand the many beautiful fishes of the North Sea.

Fish #129 Norway Redfish *Sebastes viviparus*
Annie Donlin
Oil on canvas 80 x 80 cm.

Norway Redfish is the smallest of the three Redfish species found in Icelandic waters, rarely reaching a length over 30 cm. Their eyes are big, their body colour red. On the gill covers there are five pointed spines, directed backwards. The members of the Sebastes genus give birth to living offspring during the summer months.
The Redfish is slow-growing and long-lived. It prefers rocky bottoms, close to shore, in depths ranging from 10 to 150 metres. It is widespread in the north-east Atlantic Ocean from Kattegat to Finnmark, Norway. It is also registered around the British Isles, the Shetlands, Faroes and Iceland. It is sporadically seen around Greenland.

When choosing a fish to paint for this exhibition, the Redfish was a natural choice. Besides my painting (AARTVARK), I am by trade a freelance graphic designer. My solo firm is called Redfish Design. There was no deep relationship with the Norway Redfish, or any other species of the Sebastes genus when I named my firm. Besides that I love the colour red and that the name is one that is memorable, the book created by Dr Zeuss "One Fish, Two Fish, Red Fish, Blue Fish" was one of those books that always sang in my soul. Thus came the name Redfish Design.

Fish #130 Moustache Sculpin *Triglops murrayi* Rachel Toll
Watercolour 21cm x 30cm

Fish #131 Thick Lipped Grey *Mullett Chelon labrosus* Adele Pound
Acrylic on panel 50 x 70 cm

My partner is an angler and the thick lipped grey mullet his nemesis. Every summer he is tortured as large mullet swirl lazily yards from his feet slurping at the bread he has thrown down to entice them. But they are canny and almost never slurp the morsel that is wrapped around his hook. The triumph of an occasional catch is quickly overshadowed by more wasted hours and loaves.

My own most recent encounter with this species came last summer while snorkelling at St John's point, a 6 mile finger of land that juts into Donegal Bay on the west coast of Ireland. As I turned a corner to explore a narrow gully, I saw a mullet feeding at the surface. I immediately stopped, expecting the fish to disappear in a flash. But it hadn't seen me. It continued to slurp happily at the surface apparently lost in the moment. I inched forward flexing just my toes to gently move my flippers. As I drew nearer the silver eye slowly swivelled in my direction and focused. They say fish have no facial expressions but I'm sure I saw the horror on its face as the reality of the situation dawned on it. This time it was gone in a flash, flying past me and out of the gully, leaving me chuckling through my snorkel.

Fish #132 Golden Grey Mullet *Liza aurata* Ali Carpenter
Soft pastel, pencil and metallic ink pen on black paper 21 x 21 cm

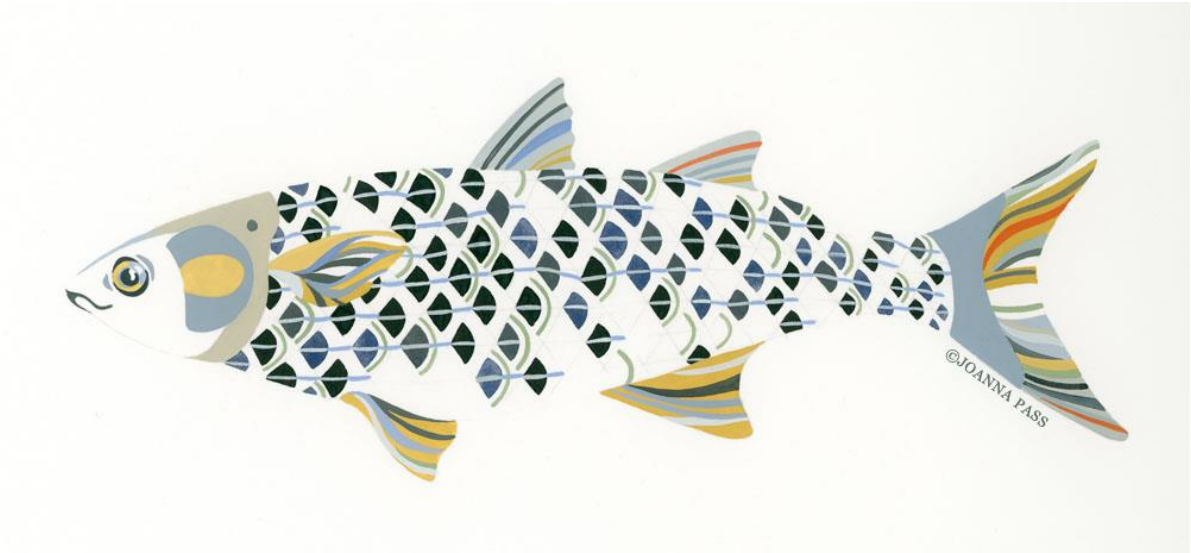
Liza aurata: I might look quite plain from afar, but look closer at the gold kiss on my cheek and my beautiful geometrical patterns. Then there's the glint and quick flash of light reflected from my silvery and gold scales, as I twist and turn with the rest of my shoal in the shallows and also my vast home of the Eastern Atlantic ocean.

I have been interested in aquatic biology from a very early age. I read Zoology at Newcastle University and then studied for an MSc. During this time I continued to dabble as an amateur artist. Now that I am no longer in paid work, I have more time to dedicate to my work. This is a first attempt at a sea creature and I hope it inspires others to take care of the oceans and to get involved with local conservation efforts, no matter how small. I chose to depict *Liza aurata* as I found the linear pattern appealing and instantly appreciated the beauty of the sleek dynamic form.

Fish #132 Golden Grey Mullet *Liza aurata* Stephanie Province
Mixed media 29 x 38 cm

The *Liza aurata* or Golden Grey Mullet as it is usually known, can be found in the Eastern Atlantic Ocean (from Scotland to Cape Verde), the Mediterranean and the Black Sea as well as coastal waters from Southern Norway and Sweden to Morocco. It has also been introduced to the Azov and Caspian seas. Inhabiting mainly estuaries, lagoons and ports, the Golden Grey Mullet is rarely found in in fresh water or in water deeper than 20m. This elegant fish has a slender grey/silver body and can be identified by the golden disc that appears on each gill. The largest of this species can be about 60cm in length and weigh as much as 1.5kg. However, most are no larger than 30cm long and weigh considerably less. The Golden Grey Mullet has a diet of small benthic organisms, insects and plankton. Its predators include European Sea Bass, the Common Dentex (a species of *Sparidae* fish) and larger eels. Whilst not popular to eat in Britain, it is caught commercially and its white tender meat is considered a delicacy in some countries. The Golden Grey Mullet is the smallest and the rarest of the true mullet species. Its conservation status is within the class of least concern.

The Golden Grey
Alchemist
in inky waters
converts
her lead grey
into
a glimpse of gold



Fish #132 Golden Grey Mullet *Liza aurata* Joanna Pass
Gouache on paper

Not a hairdo of an aging, flamboyant rock star but a shy, elegant fish identifiable by a golden spot on the gills. The Golden Grey Mullet, cautious in nature, prefers the calm and stillness of shallow sea waters. Swimming as small shoals these ghostly fish seek shelter in harbours, estuaries, coves and bays. A scavenger, rather than hunter, means a diet of algae and other marine vegetation, detritus and benthic organisms such as worms. This beautiful fish, if given the chance, can grow to 60cm in length and is believed to live to 25 years of age.

Fish #133 Thinlip Mullet *Liza ramada* Catherine Knee Acrylic 41 x 51 cm

The Ghost in the Water

Silently, I swim near the surface
in the shallows,
in the still and calm
I touch your craft, your boat, your ship
as it wallows in the marina.
I swim into your rivers,
nibbling the detritus,
my silver scales flashing.
In the sunlight, you see me,
I am just there...
just there!
Your shadow looms.
In a moment, a second, a flash
I am gone,
a grey ghost in the water.

The Thinlip Mullet is an elongated fish, with large scales and no lateral line. They are blue-gray, being darker at the top of the body and lighter further down. They prefer calmer, still water and don't swim much more than 10m deep. The thin lipped mullet is a scavenger, not a hunter, eating worms, dead fish etc which they find on the sea bed. They are easily seen shoaling in harbours and estuaries, and sometimes even enter rivers. These fish are quite tolerant of less clean, or stagnant water.

The thin lipped mullet live for a long time, and it is thought that they live up to about 25 years, but they grow slowly and mature late in their lives. This causes a threat to them from fishing. If a thin lipped mullet is caught in stagnant water, it can affect their taste. They are fished for by using nets, except when fished by a recreational fisherman. It is hard for a fisherman to catch them, because, although easily visible, they frighten easily and swim away even at the sight of a shadow. I have heard it told that they are sometimes referred to a grey ghosts by fishermen, although I am not sure how accurate that is.

Fish #134 Pomfret *Brama brama* Kate White

Fish #135 Rough Pomfret *Taractes asper* Maxim Griffin

Fish #136 Atlantic Fanfish *Pterycombus brama* Keith Ready Watercolour and coloured ink 32 x 40 cm

Atlantic Fanfish

Observe me lurking
In the dark depths of the ocean,
Looking over my shoulder,
A nervous twitch in my eye.

From the shadow of a rock
I scan the murky sea
To trap some small morsel,
A treat for my tea.

But I'm not the fish I was
Sparky, spiny, sharp-eyed
Fish-tailed.

Now small convulsions twitch my fins,
And quite sudden rumblings
Twist and grip my guts.

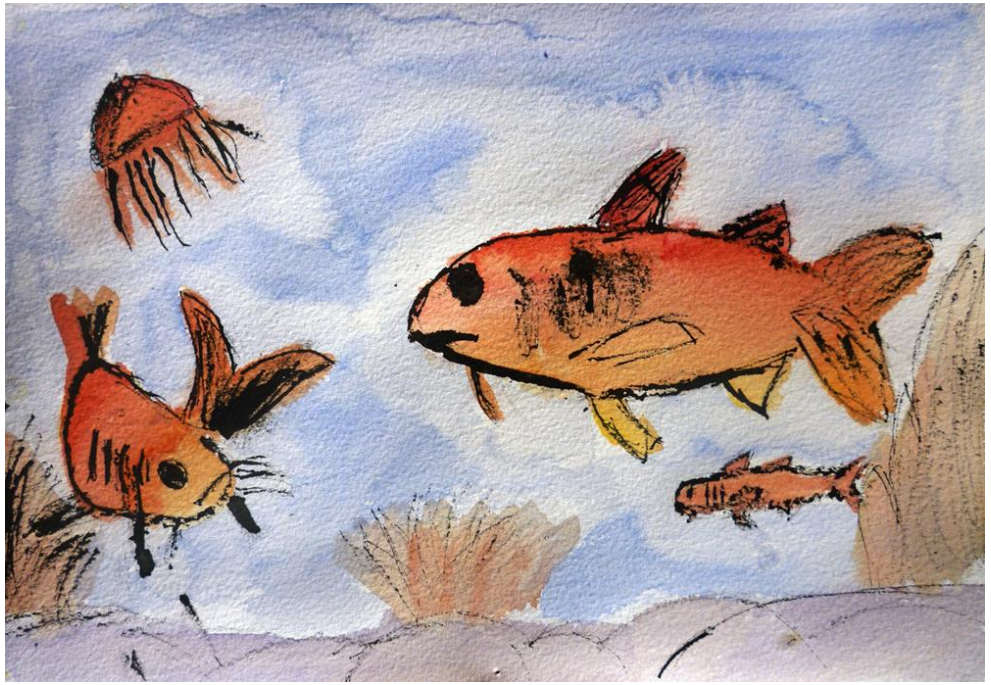
My nightmare used to be those
Scavengers in the sky
Scooping me up
Into a netted hell.

But now my fishy story friends
Speak of a new contagion
Clogging up fins and bones.

The very water, my daily breath, they say
Is turning into a plastic jelly.

This is a subtropical fish mostly found in the West Atlantic - Newfoundland in Canada, the Northern Gulf of Mexico and Jamaica, and East Atlantic - Norway and south of Cap Lopez, West of Mayumba (Gulf of Guinea) and there have been reported sightings in Iceland. The dorsal and anal fins are without scales, and the diameter of the eye is much larger than the snout length. The maximum length of the fish is approximately 46 cm. This fish lives down to a depth of 400 meters and is a seasonal migrant and breeding takes place all the year round.

Fish #137 European Seabass *Dicentrarchus labrax* David Andrews



Fish #138 Red Mullet, *Mullus barbatus*, Lizzie Palmer (aged 11)

My Red Mullet

There once was a fish named Fred,
His fins were swishy and red,
He swam 'round all day, in a wiggly way,
Until one day he was dead.

The reason that poor Fred was dead,
Was the oceans were dirty you see,
'Pollution', he cried as he wiggled and died,
So clean up our oceans for me!

Fish #139 Red Mullet *Mullus surmuletus* Tracey Gaytor Wet & dry hand felted wool & silks & textiles 27 x 42 cm

"A very handsome mullet"

I offer you the very handsome striped red mullet. A colourful fish with red coloured skin, pale pink flesh and thin yellow strips along its body. Forget its blunt snout, slightly compressed body and notice the elegant whisker-like sensory organs (barbels) under its distinctive chin. This mullet grows to an average length of 10-25cm, with sizes of 45cm possible. A maximum reported age is 11 years.

Mullus surmuletus is found from Norway to the English Channel. It is also found as far away as west Africa and as close as the Mediterranean. It is found at depths down to 300 metres. It uses its barbels to locate food in the murky sand and mud near the ocean floor. Its diet is mainly shellfish and crustaceans.

Currently in Europe, the striped red mullet numbers are in decline through possible overfishing. Thankfully numbers in northern waters are increasing due to the warming effect of climate change. Overall this means there is a commercial interest in this fish which is classed as "moderate vulnerability". More research is required to protect this fish from potential overfishing.

Fish #140 Meagre *Argyrosomus regius* Ali Elly
Watercolour on paper 31 x 41 cm

Also known as a shape-fish, stone bass and bubbler bar, a Meagre resembles a bass in shape, but is very different in many respects. It belongs to the *Sciaenidae* family with a pearly-silver coloration. In the wild it typically lives in deep water in the Mediterranean, the Black Sea and the Atlantic coast, but is often found in shallow and rocky seabeds. It can reach up to about four feet in length and can weigh up to 65 pounds. Sadly it is a sporting fish and extremely good eating; because of this it is reported it may have been over-fished off the European coast centuries ago. It is so rare in British seas that there are no angling records. A few specimens were caught in the North Sea during the 19th century.

Farmed meagre is emerging into the UK market. It is farmed in Mediterranean countries, mainly in Italy. Although it can be farmed in both land based systems and in open sea pens it is mainly farmed in the sea in open pens. As with most open intensive production the environmental impacts can include disease transfer and pollution issues. Feed use and its sustainability is also a concern. Really interestingly, this fish is able to make a drumming noise with muscles adjacent to the swim bladder that can be heard at up to 30 metres.

Fish #141 Bogue *Boops boops* Rachel Rolph
Collage 41 x 59 cm

At first glance, the bogue may appear to be a dull fish, especially next to the iridescent patterning of a mackerel's back or the lazy grace of a basking shark. Look closer, however, and thin golden stripes can be seen running from head to tail, adding an extra sparkle to its slender silver body, and its eyes are strikingly large, hence the name boops - "cow-eyes". While bogue have been known to reach 40cm in length, these gregarious fish usually grow to 20cm on a diet of crustaceans, plankton and seaweed. Schools can generally be found down to 100m in waters from Norway to Angola and they rise to the surface at night.

With a conservation status of Least Concern, the bogue is currently living in harmony with the fishing industry, which fishes bogue for human consumption and for use as bait. However, a study found that the communities of parasites hosted by bogue had been significantly altered by the effects of an oil spill, proving that the balance between humans and the oceans is a precarious one.

Despite its obvious use and apparent abundance, the bogue is an unknown fish to many - I had never heard of it before this project, and chose it as my subject because of its interesting Latin name rather than any prior knowledge. A search for appearances of bogue in art, folklore and literature led me only to a postage stamp from Oman, indicating perhaps that the bogue has been bypassed by artists and storytellers in favour of more glamorous fish. After being neglected by artists of the past, it surely deserves its place as one of the North Sea's #200fish.

Fish #142 Morocco Dente *Dentex maroccanus* Lorne Felgate Reclaimed wood and found objects from Cleethorpes beach and the Northumberland coastline

Dentex maroccanus inhabits various types of sea bed but prefers gravel from a depth of 20m to about 500m. Its abundance varies with depth according to latitude. It is a carnivorous species, feeding on fish, crustaceans and molluscs. The maximum length for this species is approximately 45cm. I have a huge hunger for all things creative. I work with reclaimed wood and found objects. Everything is reclaimed.

Fish #143 Axillary Seabream, *Pagellus acarne*, Carey Jones

Axillary Seabream, *Pagellus acarne*, was named in 1827 as *Pagrus acarne Risso*. This sunbeam of a fish is found mainly in the North-east Atlantic from the North Sea and west of the British Islands to West Africa and the Mediterranean Sea and is known by a variety of names: English = Axillary Seabream, Spanish Seabream; French = Pageot Acarne, Pageot Acarné, Pageot Blanc; Spanish = Aligote, Besugo, Pancho Picudo.

The poor Axillary Seabream is a highly-valued and heavily-exploited commercial species and there is evidence of population declines despite current conservation measures - usually due to its minimum catch size being pre maturation in some European countries.

Apart from its iridescent prettiness the most interesting fact about this little fish is that it is a protandric hermaphrodite, meaning it begins life as a male and then, between ages of 2 and 7, it becomes female. Its diet consists mainly of worms, molluscs and crustaceans and, as it lives down to a depth of 500 metres succumbs to vessels using bottom trawl, longlines and gill nets.

Fish #145 Common Pandora *Pagellus erythrinus*, Naomi Doughty Acrylic on canvas 70 x 50 cm

A demersal species inhabiting various types of bottom (rock, gravel, sand, mud) to depths of 220 m, but mainly in the upper 100 m, the young occurring nearer to the shore. During winter, the stocks move into deeper waters. It is a protogynic hermaphrodite (first females, becoming males in their third year at sizes of about 17 to 18 cm). The species is omnivorous, with a predominantly carnivorous diet.

Reproduction occurs from spring to autumn depending on hydrological conditions. In the Atlantic, spawning occurs in spring, extending sometimes until early summer (Lloris et al. 1977). This species is a protogynous hermaphrodite (Andaloro and Giarritta 1985, Girardin and Quignard 1985, Papaconstantinou et al. 1988, Livadas 1989), the females becoming males first in their third year at sizes of about 17 cm (Pajuelo and Lorenzo 1998). Sexual maturity occurs at two to three years of age. The sex ratio is unbalanced in favour of females (Vassilopoulou et al. 1986, Pajuelo and Lorenzo 1998). The absence of females in the largest size classes implies that sex conversion occurs in all fish.

There is potential for localized declines from fishing. The species occurs in some marine protected areas in the Mediterranean Sea. The minimum size limit is 15 cm in Turkey. In the Canary Islands, where conservation legislation on fisheries exists, a minimum size limit has been implemented for the species (220 mm TL), but is of limited benefit because the minimum length which may be legally kept is smaller than the length at first maturity of males (Pajuelo and Lorenzo 1998). This species is therefore susceptible to exploitation at a size when many other coexisting demersal species are mature or immature. Measures such as closed season or changes in fishing pattern would be desirable to safeguard the spawning stock and the recruits. It is recommended to implement fishing regulations to ensure that this species is not targeted during its short female reproductive period (Pajuelo and Lorenzo 1998).

Fish #147 Gilt-head Bream *Sparus aurata* Garth Bayley Pen and ink on 200g cold pressed paper 32 x 24 cm

A fish of the bream family *Sparidae* found in the Mediterranean Sea and the eastern coastal regions of the North Atlantic Ocean. It commonly reaches about 35 centimetres (1.15 ft) in length, but may reach 70 cm (2.3 ft) and weigh up to about 7.36 kilograms (16.2 lb). The gilt-head bream is generally considered the best-tasting of the breams. It is the single species of the genus *Sparus* - the Latin name for this fish - which has given the whole family of *Sparidae* its name. Its specific name, *aurata*, derives from the gold bar marking between its eyes.

I was a chef for many years so I have included a recipe for you.

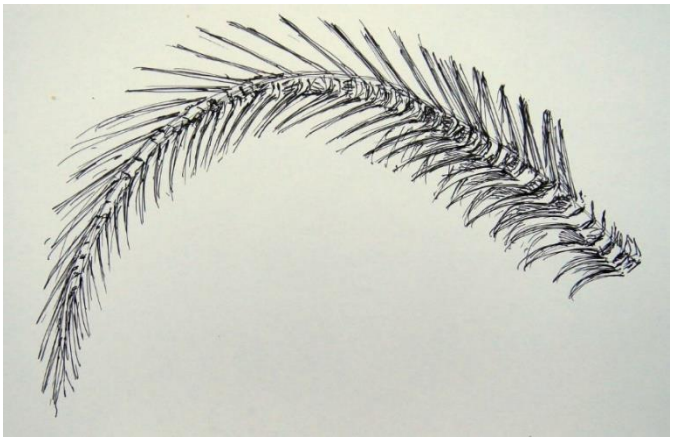
Baked Gilthead Sea BreamIngredients:
Fresh Sea Bream x1, 1-1½ lb
Extra virgin oil 6 tablespoons
Fresh Rosemary 4 sprigs
Garlic 2x cloves (chopped)
Shallot 1x (chopped)
Fleur de Del ¾ tablespoon (French coarse sea salt)
Fresh grounded pepper ½ teaspoon
Fresh lemon slices x4

Clean the fish and dry it with a paper towel. To help the fish bone removal once cooked, make a slash along the fish and another cut along the backbone on both sides and at the end of the tail. Use a small bowl to mix salt, pepper, one sprig of chopped rosemary, garlic and shallot with olive oil. Rub the fish with the marinade and make sure it goes inside the slit along the backbone. Spread one teaspoon of mixture inside the fish cavity; place two half slices of lemon and one sprig of rosemary inside the cavity as well. Marinade the fish for 30 minutes. Place a piece of baking paper on a baking dish, drizzle the baking dish with olive oil. Transfer the fish to the tray. Make sure to spoon all the marinade on top of the fish for extra flavour. Put two sprigs of Rosemary on top the fish. Pre-heat the oven to 425F and baked the fish for 15 minutes. Once cooked, remove the baking dish from oven; let it rest for five minutes before transferring the fish to a large serving dish, drizzle with olive oil and serve.

Fish #147 Gilt-head Bream *Sparus aurata* David Green
Acrylic 15 x 21 cm

The Gilt-head Bream is found mainly in the Mediterranean sea and also round the eastern coasts of the North Atlantic Ocean. It is normally found at depths up to 30m. but is known to reach 150m. It commonly measures 35cm. in length but may reach twice this size and weigh up to 7.3kg. Its diet consists of mainly shellfish with some plant material and it is usually found on sandy bottoms. The most common predator of the fish, apart from parasites, is a seabird, the Great Cormorant.

Commercial status:- The fish is produced in large numbers by aquaculture in the Mediterranean, but the rapid growth cage-reared fish has raised concern about the impact of escaped fish on the genetic diversity of natural populations. Conservation status:- Protected status in parts of Spain and Turkey, and shore and boat fishing is restricted in the UK
The reason I picked this particular fish to paint is that I have seen it many times on the fishmongers slab and thought how striking it was.

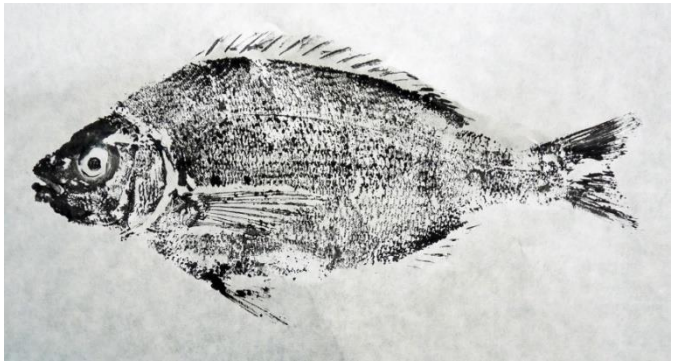


Restaurant drawing of fish bones after dinner

Fish have interested me for some time particularly flat fish. I often draw the bones after a meal (much to the exasperation of the restaurant staff). I have also recently carefully boiled some filleted plaice to try and get a print from the bones.

A ghost print from fish bones

I used a Japanese technique Gyotaku a traditional Japanese art of printing from an actual fish. A local fishmonger kindly gave me a Seabream to print from. The technique gives some lovely detail of the fish scales and fin shapes which is an ideal basis to develop a design.

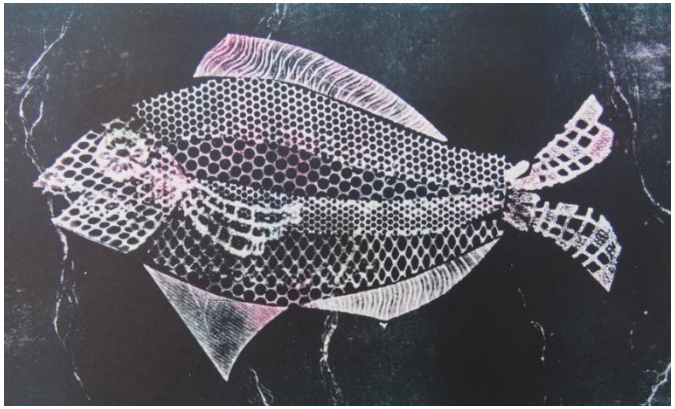


Gyotaku print from Black Seabream

I have used this Gyotaku print as a basis for plasticine demo prints for workshops - plasticine is rolled out and materials and tools used to emboss the plasticine which is then inked up and printed from.

Black Seabream printed from embossed plasticine

I have created 3 new prints for #200 Fish. The first print is created from a variety of materials such as sequin waste, corrugated cardboard and lace that, using the printing press, have embossed mount board and then a print is taken from the mount board.

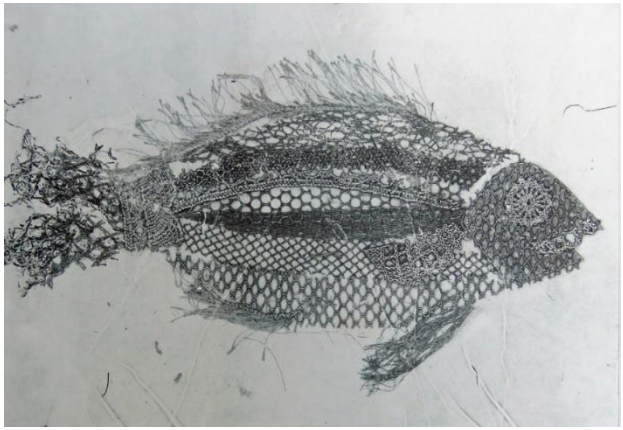


Black Seabream from embossed mount board

I have also created two monoprints. Using materials similar to those that embossed the mount board, textures are created on an inked plate and a single print is taken.

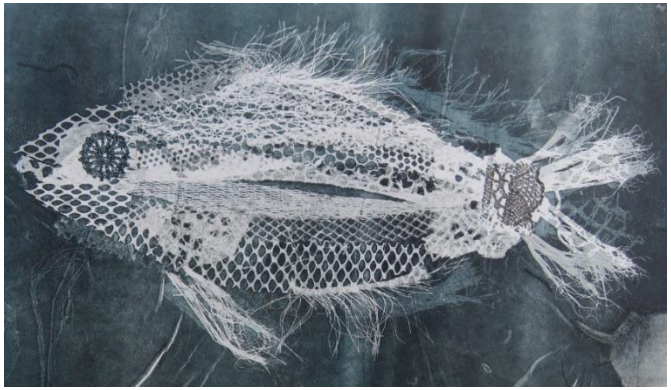
Fish #148 Black Seabream
Spondyliosoma cantharu Jackie Curtis
'Ocean light'
Black Seabream Monoprint
18 x 28 cm

Blue Fish is an original monoprint that was based on a traditional Japanese technique Gyotaku print from an actual Black Seabream. The Gyotaku print has some lovely detail of the fish scales and fin shapes which formed an ideal basis to develop my monoprint from. A monoprint is a one off print (1/1). I used lace, sequin waste, mulberry bark, fruit nets etc. to push texture into blue/green ink on a plate which was then printed.

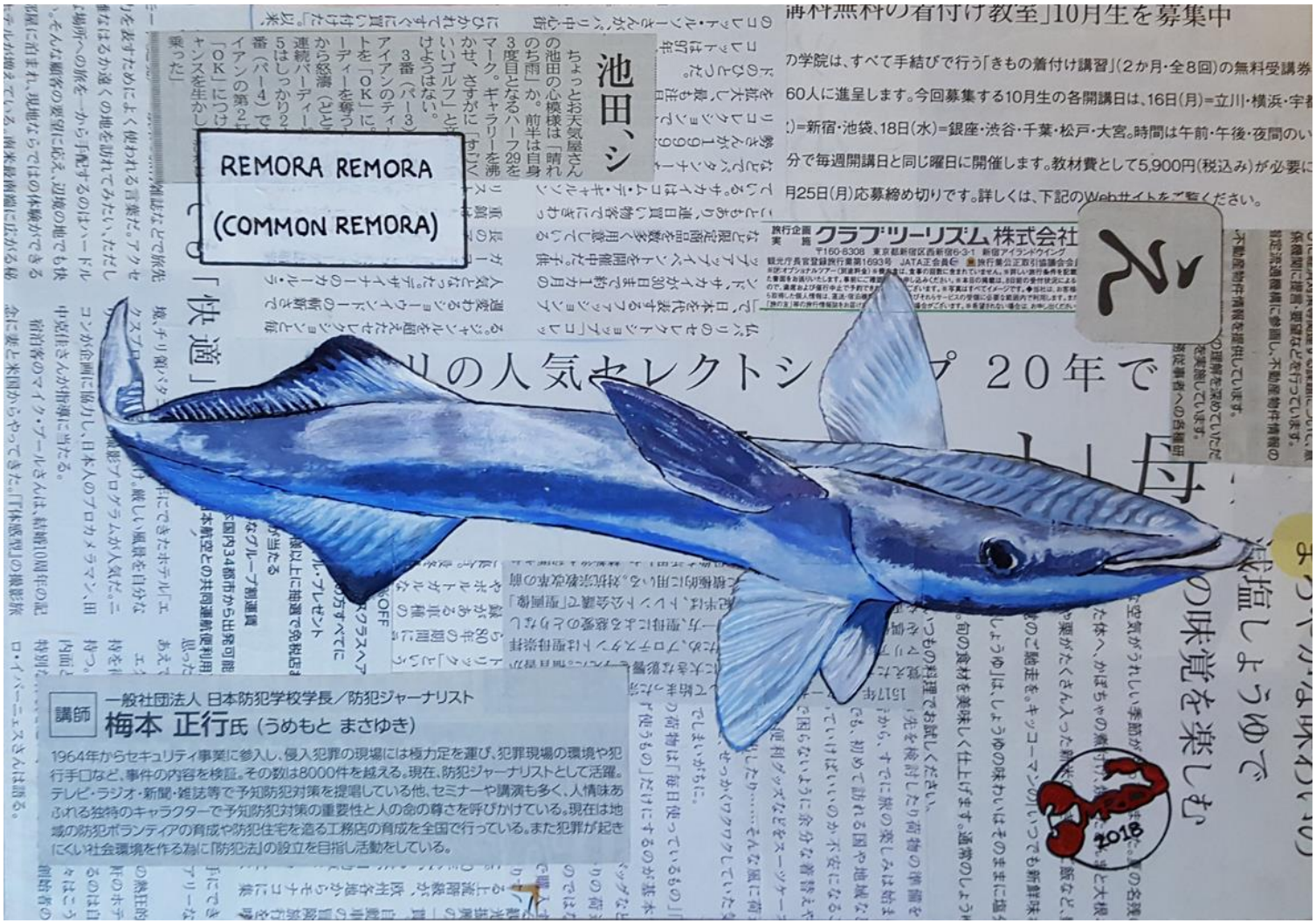


Black Seabream Monoprint

Ghost of Black Seabream - what might become



Fish #149 Common Remora, *Remora remora*, Matthew Dover Acrylic on newspaper covered mounting card 21 x 29 cm



Flora The Remora

The common remora, *Remora remora*, is a pelagic marine fish belonging to family *Echeneidae. R. remora* is different from other remoras in the family *Echeneidae* by the modification of its dorsal fin. The dorsal fin, which has 22 to 26 soft rays, acts as a suction cup, creating a vacuum to allow it to attach to larger marine animals, such as whales, dolphins, sharks, and sea turtles.

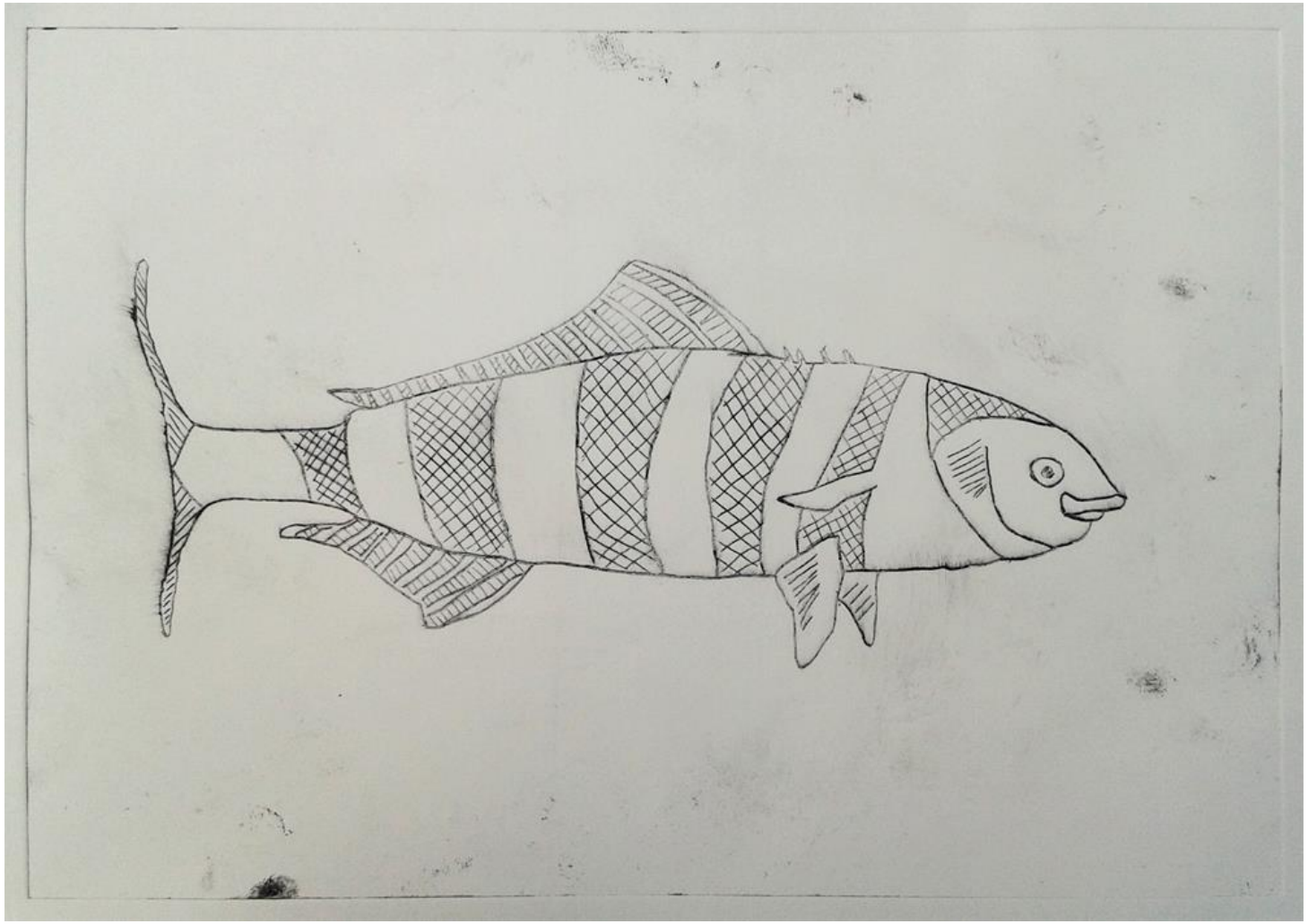
R. remora and its host seem to partake in a symbiotic relationship; the common remora does not seem to have a negative overall effect on its host. The host provides the remora with fast-moving water to bathe its gills, a steady flow of food, transportation, and protection. The remora benefits the host by feeding in part on some of its parasites, but increases its hydrodynamical drag. The common remora's attachment to one host can last for up to three months. During this time, the remora can move its attachment site if it feels threatened. The common remora cannot survive in still water; it needs water flow over its gills to provide it oxygen.

This remora is commonly found in warm marine waters and have been seen in the western Mediterranean and the Atlantic, as well as the North Sea. The remora consumes food scraps from its host, as well as plankton and parasitic copepods. As the smaller symbiote, the remora is known as the symbiont.

Each piece I produce comes with a little story. Here is Flora's:
This is Flora. Flora is a flat-earther, anti-vaxxer and general science denier. Flora is of the opinion that all of the other remoras have fallen prey to a massive and nefarious conspiracy on the part of the science community and world governments. When challenged to explain why such a conspiracy would exist, Flora starts to cough and splutter, and doubles down on her bullshit. 'GMO!' 'Chemtrails!' '911!'. Notable in its absence from her response is any plausible reason why anyone would bother to dupe the whole of remoradom into believing in the consensus. Flora is unbelievably irritating and frustrating, and none of the other remoras like her very much.

Fish #150 Pilot Fish *Naucrates ductor* Christopher M. Walshaw

Dry-point etching 20 x 28 cm



THE PILOT FISH

This brave little fish with unenviable task,
is known as Naucrates Ductor.
She cleans and gleans between the teeth,
of the shark who could easily abduct her.
This pair so rare swim side by side,
and though the host is the meanest,
he respects and protects the Pilot Fish,
his friend and dental hygienist.

A carnivorous fish of the Trevally or Jackfish family that congregates around sharks, rays and turtles where it eats parasites and morsels of food left over from the host's feeding. Whilst widely distributed in warm or sub-tropical seas it is an occasional visitor to these shores. They are known to follow ships leading the ancients to surmise that they would navigate the ship to its desired course. One myth surrounding our fish is that it can pilot the shark towards its prey as well as the mariner to safety. In Earnest Hemingway's "A Moveable Feast" (published posthumously in 1964), the hero refers to the character, John De Passos, as a pilot fish for the wealthy after falling out with him over the Spanish Civil War.

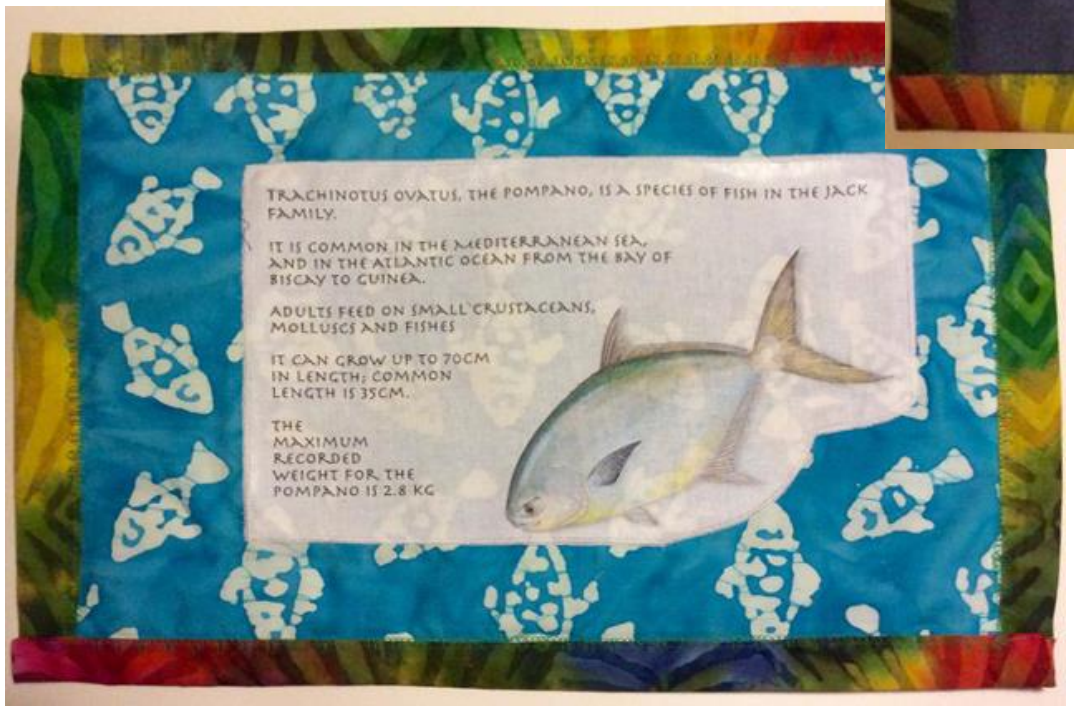
The pilot fish's relationship with the shark or other host is a MUTUALIST one. The pilot fish gets protection from predators and the shark gains freedom from parasites, and my little poem muses on this unusual relationship. Although good to eat the pilot fish is seldom on the menu as to catch them is highly unlikely. Apart from the difficulty of drawing the fish away from the shark there remains the frenetic behaviour once on the hook which renders it a worthy opponent who refuses to submit.

Christopher M. Walshaw: A Louth born dairy farmer, musician and actor has created the pilot fish image in an intaglio dry point etching method attempting a simple but characterful portrayal of this fascinating fish.

Fish #151 Pompano *Trachinotus ovatus* Terry Loader
Machine and hand stitched quilt using cottons and cotton batiks 31 x 43 cm

Trachinotus ovatus, the Pompano, is a species of fish in the Jack family. It is common in the Mediterranean Sea, and in the Atlantic Ocean from the Bay of Biscay to Guinea. Its range extends into British waters, the North Sea and Baltic. Adults feed on small crustaceans, molluscs and fishes. It can grow up to 70cm in length; common length is 35cm. The maximum recorded weight for the pompano is 2.8 kg.

I chose the Pompano because it sounded like the sort of fish you would want to have with you in a crisis - pompous but confident of its own abilities and attractions. And it's a Jack, which makes it sound like somebody's brother. And who couldn't resist a fish that not only has had three (count them my friend) US ships named after it (well, two of them were submarines, but that actually makes it even more exciting), but also has an entire beach area (what our American cousins describe as a significant 'city') in Miami, in the sunshine state of Florida, named for it too!



And it's a good-looking fish too - deep-bodied and mackerel-like, typically silver and toothless (ignore that bit), with a forked tail and narrow base. Of the 20 described species, most are valued as food. Some species are considered prize delicacies and an important game fish. I personally like the sound of the Cayenne Pompano - is this food that seasons itself? - and of the Paloma Pompano, dove-like and flying free. I will avoid, if I can, the Blackblotch Pompano and its close cousin the Snubnose, because frankly they sound just plain ugly. So swim on, my pompous fish buddy, in your oceans of choice. Who knows, one day we may meet on the golden sands of a Mediterranean beach and, if we do, I promise that I will throw you back.

Fish #151 Pompano *Trachinotus ovatus* Robin Chandler Oil 45 x 90 com

10,000 years ago great ice sheets spread across the globe, and the Doggerland Bank, a prime North Sea fishing ground, was a plain connecting Britain with the European Continent. Years ago I ferried from Rotterdam to Hull pushing on to London and King's Cross railway station; some days later I boarded a train at Waterloo Station for Dover and the ferry to Ostend. It was my first journey to Europe, my first voyage crossing big water, and the North Sea waters kindly served to baptize me. Captivated by the waves and the wind, I watched from the deck entranced, perhaps sensing some deep link with the water's depths. Born and raised in the states, my ancestors emigrated several centuries ago from Britain, France, Germany, Norway and Scotland - all places connected to and shaped by the North Sea.

In modern times, trawler nets, scouring the sea floor for fish, have uncovered mammoth and saber-tooth bones and the hunting tools of our Ice Age ancestors. Today, the North Sea's big five: cod, haddock, herring, plaice and sole are commercially fished providing nourishment to consumers throughout the world. In a deep-time "clock of the long-now" way of thinking, my first sea crossing was really a return to the place where my genetic story began among the Holocene's community of animals, plants and humans. Then as now, the peoples of the lands defining the North Sea's shores found their livelihood alongside this great expanse harvesting abundant resources of fish. In later ages, North Sea residents also discovered petroleum, and harnessed the wind.

Unfortunately, increasing human populations have placed heavy demands on North Sea resources. Two hundred native fish species have been identified in the North Sea; the "big five" are the most economically important, although other fish commercially harvested also comprise halibut, turbot, whiting, pollock and saithe. Many of the two hundred fish species are vulnerable, endangered or threatened with extinction including the Atlantic cod and Haddock (both members of the big five) as well as many kinds of shark, skate, and ray, the European sea sturgeon, the European eel, the Atlantic Bluefin tuna, and the Atlantic halibut. So far only one species, the Houting, a whitefish, is extinct. However relieved we are at this solitary number, this should serve as a warning, loud and clear. While nations cooperate to manage these important resources through fishing quotas, many species have been endangered by historic overfishing practices. Other human impacts on the environment including pollution and climate change adversely affect these fish species threatening their survival. Worldwide the negative results of human activities has become so dominant, a new geologic age, the Anthropocene, has been proposed to signify the commencement of humankind's significant impact on the Earth. And the North Sea, one of the earth's most densely populated and heavily industrialized areas, is increasingly under stress, threating one of the world's most fertile and productive regions.

Fortunately, not all North Sea fish are endangered or threatened yet, and the *Carangide* (family) *Trachinotus* (genus) *ovatus* (species) commonly known, as the Pompano is only deemed moderately vulnerable. The Pompano makes it's home in pelagic neritic waters - a marine environment defined as clear shallow waters over sand or mud bottoms corresponding to continental shelf area - found throughout the North Sea and in the Mediterranean. Swimming in schools, the Pompano uses its small band of teeth to feed on small crustaceans, molluscs and smaller fish. Valued as food by humans, it is primarily a game fish, but can also be fished commercially. It's length ranges from 35 to 70 cm and it weighs typically 2.8 kilograms. A deep-bodied fish, the Pompano is silver green blue grey in colour with some areas of yellow, three to five vertical black spots on the lateral, a forked tail, two dorsal fins, and one anal fin.

There are twenty species in the *Trachinotus* genus such as the *Trachinotus carolinus*, known as the Florida Pompano, found along the western coast of the Atlantic ocean and eastern coast of the United States, and is a popular sport and commercial fish. Pompano Beach, Florida derives its name from the fish; the city's name resonates in the imaginations for many Americans, mine included, as it is a place associated with vacation fun in the warmth of the sun after long, cold, snowy winters.

Fish #152 Atlantic Horse Mackerel *Trachurus trachurus* Aziz Khan Acrylic on driftwood 10 x 57 cm

I had gone fishing off Plymouth with a few friends in the summer.
Everyone was catching loads of mackerel except me. I was catching more driftwood than fish.
So, when I got home, I painted mackerel that I didn't catch on the driftwood I did catch.
Even the painted fish appear to be laughing at me!

Fish #156 Black Goby *Gobius niger* Christine Hurford.
Bone china and graphite 22 x 37 cm

I chose the black goby, not because I knew what it looked like, but the first photos I looked at the fish seemed to look miserable and grumpy, hiding by rocks or stones at the bottom of shallow water, and not looking that black, rather a sandy colour with irregular patches on it. After drawing and making insects for a time, this morose goby would be a change. Other photos then showed the black goby swimming with fins up - in fact it seemed to have a lot of fins making it look enormous. I found out there are lots of species of goby, sixteen of which live in UK waters. They had names such as diminutive, leopard spotted, painted and two spotted. Also it was not large at all, 7 cm in length would be a maximum. At such a size they could be overlooked which must be an advantage. The male sorts out a clean firm nesting place and then invites the female to inspect. If all goes well, the male turns a darker colour whilst guarding the eggs, perhaps that is another advantage. They eat small invertebrates and can live for at least four years.

After experimenting, I made a bone china rectangle and 'engraved' the black goby on it using swell paper and a special heat machine which raised my drawn lines. It was then printed onto the clay, high fired in a kiln and then graphite used to enhance the fish. This has a metallic sheen, so my goby looks dark. The ceramic plate is 22 cm by 33.8 cm and is made to lean against or on top of a stand.

Fish #156 Black Goby *Gobius niger* Mary Jackson Charcoal on paper 60 x 60 cm

I chose to draw the Black Goby as it is not a well-know fish and I felt some affinity with it - we are both quite small and enjoy swimming in shallow, sandy waters. Beyond that we diverge. Sometimes dark-grey, sometimes brown with lighter markings the Black Goby has a characteristic pointed first dorsal fin. It has a chunky head and feeds on invertebrates and some small fish. It breeds in the summer time when the female lays her eggs in a nest made for her by the male, takes guard until the eggs hatch. Whilst it can sometimes look a bit grumpy it has a certain charm and was fun to draw.

Fish #157 Two-spotted Goby *Gobiusculus flavescens* Adele Pound

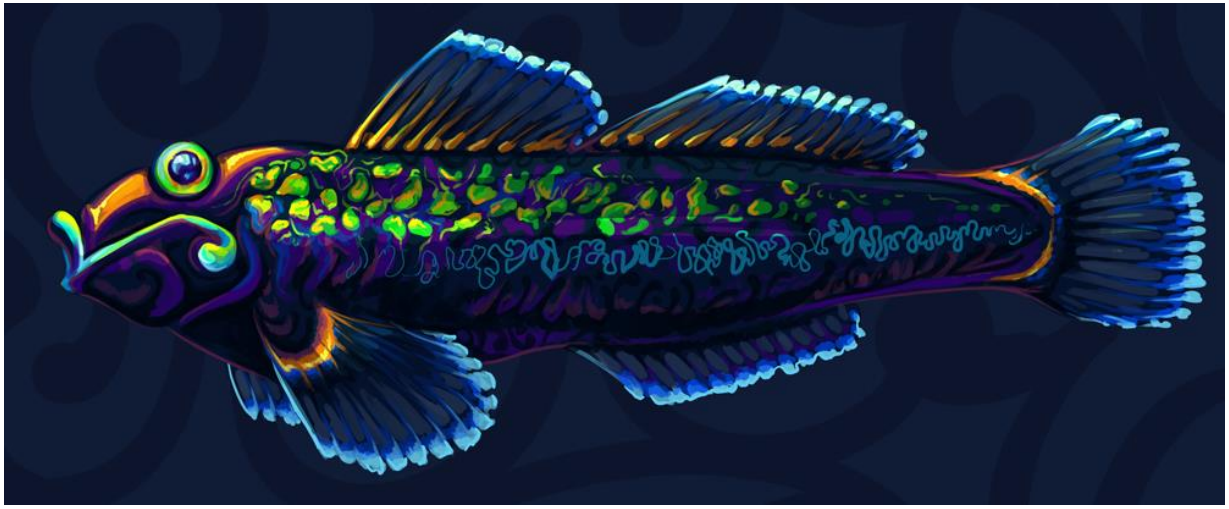
Acrylic on canvas 61 x 51 cm

Both sexes of this species have a dark spot at the base of the tail. The males have a second spot behind the gills. So is the female the 2 spot goby - one on each side, or is it the male - two each side but four in total? I guess it all depends on how you count them. In any case, when I am snorkelling, I always seem to run into two spotted gobies somewhere. Unlike other goby species that sit on the sand or rock surfaces, the two spot likes to hang out in mid water. They hover in small groups in the shelter of tall clumps of seaweed glistening like tiny green and red jewels. They seem a little less concerned by my approach than other fish. They must know I am far too slow to be a threat.

Fish #158 Frie's Goby
Lesueurigobius friesii
Fiona Rich
Gouache and watercolour on Bristol board 23 x 31 cm

The Fries's goby is native to the Eastern Atlantic Ocean. It lives near the coast, and digs U-shaped burrows into muddy sand, at depths of from 10 to 130 metres. Fries's Gobies are frequently found with the lobster (*nephrops norvegicus*). They typically grow to at least 94 mm, and live around 11 years.

When researching Frie's goby, I was fascinated by how many colours they have on their bodies. Although they seem quite plain at first, they have very particular markings, and in the light they have a beautiful purple-blue hue. I wanted to celebrate this in my painting.



Fish #159 Round Goby *Neogobius melanostomus*
Laura Gisby
Digital drawing printed on canvas 46 x 102 cm

Fish #161 Common Goby *Pomatoschistus microps* Alison Spittles

The common goby (one of a family of goby species found all over the world) is a small fish, usually a maximum of 6cm, found in the sandy shallows and intertidal pools of coastal areas. It sometimes occurs in brackish water and upstream from river mouths due to its ability to tolerate low salinity levels. The common goby is found in the Baltic Sea, in the coastal waters of Norway, Great Britain and Ireland and the western Mediterranean.
An important food source itself for birds and other fish, the goby's diet consists of tiny crustaceans, worms and insect larvae. The common goby migrates downstream in the spring to breed. 100 - 1000 eggs are laid under a shell where the male goby fans the eggs with his tail to oxygenate them as they develop.

I was inspired to paint the unassuming and little-known goby after looking through an old copy of the Ladybird Book of the Seashore. It reminded not only of my childhood experience of loving that series of books on nature, but more vividly, of my frequent visits in the 1960s to the rocky shoreline, known as the 'scar' at Whitby where I was brought up. I had the privilege to see the then unspoilt beauty of pristine rockpools full of wonderful creatures. As well as hermit crabs, sea anemones, winkles and whelks, there were always tiny fish to be seen. But I confess, I never knowingly saw a common goby!

Fish #162 Sand Goby *Pomatoschistus minutus* Ali Elly
Watercolour on paper 31 x 41 cm

A Sand Goby is a small abundant fish found all around the North Sea, British coasts and Mediterranean. Usually between 60mm to 95mm in size, slightly longer than a common goby and as its name suggests, sandy in colour. This small fish from the goby family can be notoriously difficult to distinguish from the common goby. It normally lives at greater depths, has eyes that are placed high and close together with a triangle mark in front of the tail. With no commercial value and living in inshore sandy or muddy waters and rock pools this fish has a diet of small crustaceans.

During experiments male gobies improve their parenting skills when females are present. The experiments, by a team including researchers from the University of Florida and the University of Helsinki, found that male sand gobies work harder at building nests and taking care of eggs when females are present - the first time such "courtship parental care" has been documented in any species.

Fish #163 Painted Goby *Pomatoschistus pictus* Barbara Rimmington Watercolour and mixed media 19 x 28 cm

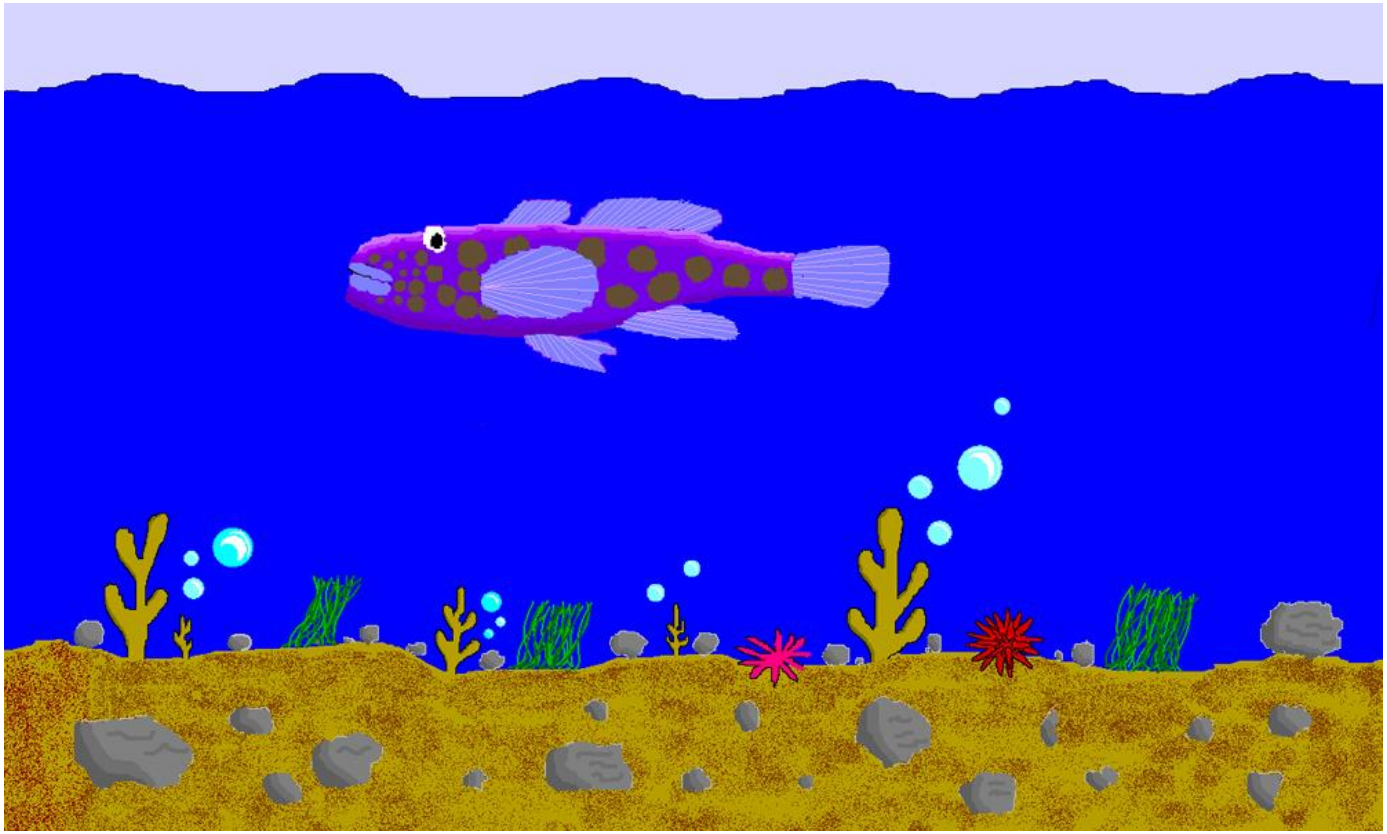
Pomatoschistus pictus, the Painted goby, reaches up to 6 cm in length. It has two distinct dorsal fins positioned closely together. The first usually has six spines and two rows of black spots, two between each of the spines. The second dorsal fin has one spine and up to 10 rays and one or more rows of smaller black spots, one or more between each of the rays. The caudal fin is more or less rounded. The painted goby is usually faun to yellowish-olive green in colour. Four pale saddles are present across the back and four double spots are situated between the saddles along the lateral midline. The areas anterior of the dorsal fins and around the breast region are naked of scales.

There is no population information available for this species; however it is assumed to be stable. The painted goby is widely distributed around the British and Irish coasts, along the Atlantic shores from Trøndelag, Norway to Spain. It is also registered in the Mediterranean. The Painted Goby is found on areas of inshore gravel, sand and mud, from just below the tidal zone down to a depth of 55 metres. Juveniles may occur in shore pools and they can school. It feeds on crustaceans, mostly copepods and amphipods.

The painted goby emits courtship sounds (drums) that are important in reproductive outcome. Temperature affects the pulse rate of the sounds, because muscle twitches typically shorten with rising temperatures. Pulse rate is likely an important factor in mate choice, combined with visual courtship. Vocal activity is energetically expensive and is condition-dependent in the painted goby. It may function as an honest signal of male quality, including paternal ability. However, how fish mate decisions are influenced by call characteristics is poorly understood. Female painted goby seem to be influenced in their choice of mate by accoustic signalling coupled with visual courtship, rather than size of male. Another study provides evidence that ocean acidification might affect the auditory responses of larval stages of the Painted Goby, with potentially significant impacts on their survival.

I was inspired to paint a fish for this project by a friend and fellow artist. I enjoy outdoor sketching, though living in Sheffield it is rarely by the sea. I like using a variety of media, watercolours, inks, pencils, etc. I also love experimenting with printmaking, using linocuts, collagraph and monoprint.

Fish #164 Leopard-spotted Goby *Thorogobius ephippiatus* Elsie Luna (age 9) Digital drawing



Find the Leopard Spotted Goby in the waters of these countries:

IRELAND
NORTHERN IRELAND
NORWAY
TINY UNNAMED PLACES IN THE ATLANTIC
ALBANIA
CROATIA
DENMARK

SPAIN
PORTUGAL
MONTENEGRO
TURKEY
GREAT BRITAIN
FRANCE
SWEDEN

GREECE
MORROCO
BOSNIA AND HERZEGOVINA
ITALY

ALL ABOUT The LSG *Thorogobius ephippiatus* is carnivorous, mostly eating small crustaceans, polychaets, gastropods, and algae. In terms of what eats it, luckily, it is in the 'least concerned status'. Its colour varies, depending on the light. When in direct sunlight, the purple turns almost white, and the spots a rather pink colour. But when in the water, it looks more like my computer drawing: purple, a bit of pink maybe, and dark brown spots.

Seen at depths from six to 40 metres, the LSG is 12-13 centimetres long.
AMAZING FACT The LSG comes from the family of *Gobiidae,* but now I have to say that some humans think that having twins are either enough or too much, but the LSG has over 1,875 other species of goby in its *Gobiidae* family, and its mating season is May to July, The male guards a nest with 2,500 to 12,000 eggs in it! So, no matter what, you will have to have a lot of brothers and sisters!

WHY THIS FISH? The reason I chose this fish was mainly because of its name, as at first I was scrolling through the list of fish to choose from, and I thought that, if its name has the word 'leopard' in it then, it must be something pretty, and so I looked it up on the Internet to see what it looked like, and if it was suitable for me. The purple immediately caught my eye, and I knew in an instant, "That's the one!" I think I said it out loud when I saw it!

Fish #165 Shanny *Lipophrys pholis* Marcelle Seabourne
Acrylic on canvas 40 x 30 cm

Shanny, Shan or Common Blenny
A search in the rock pools or damp crevices at low tide on any suitable patch of UK coastline may well be rewarded with a sighting of one these delightful little creatures, only about five and a half centimetres in size. The shanny is perfectly at home in the extremes of its constantly changing habitat. The outside of its body and the roof of its mouth have an excellent blood supply, exchanging oxygen and carbon dioxide so the fish can survive quite comfortably breathing air until high tide returns. Covered with pigmented spots, the shanny can adapt its colouring to blend in with its surroundings or to signal to other fish.
The male shanny carefully selects a suitable spot for a nest to tend eggs from several different females. Research has shown that he will return to the same nest site year after year, demonstrating homing abilities, including well-developed navigation skills and an awareness of its position remarkable in such a small creature.

As a shallow water species, occurring only up to a depth of eight metres, the shanny may be adversely affected by coastal development and pollution, so is a useful indicator for the health of shoreline areas. It is highly sensitive to organic contaminants and suffers particularly in very restricted areas because of its inability to move away from its home range.
The shanny may live for up to ten years and can be kept in a marine aquarium. Being so intelligent, it can even learn to climb out onto a rock and take food from your hand.
Many images of fish show a side view aimed at assisting identification, but for this painting I wanted the viewer to engage directly with the shanny. 'Standing' on its pectoral fins, with beady eyes looking out at me, the fish seems to have a personality and reminds me of the link between marine life and ourselves.

Fish #166 Yarrell's Blenny *Chirolophis ascanii* Jackie Mills

Pen and wash 20 x 30 cm

Chirolophis ascanni, or Yarrell's Blenny, is in the Stichaeidae family and is usually found on the sea bed at depths of between 20 metres to 200 meters. It hides among rocks or weed. This blenny has very occasionally been seen in rock pools, however this is more than likely caused by being washed into them by rough seas. It has a stout, elongated body with a single, spiny, dorsal fin which runs continuously down the back. There is also a pectoral fin, an anal fin and a small round caudal fin. Colouration can vary, but is based on pinks and browns, which can extend from bright red to dark brown to tan depending on the location. There is always dark patches and bars. Yarrell's Blenny is recognizable because of the blunt head, frog-like mouth and banded eyes which have large, fringed, tentacles above them. The colour of these tentacles can vary from bright yellow to pinky cream. The eye band extends down to a stripe down each cheek.

Yarrell's Blenny is found more frequently found along the Norwegian coastline, however it lives in lesser numbers in the UK, primarily in groups along Scottish and Irish coasts, and in the Orkneys, Shetland and Faroe islands. The blenny feeds on algae and small creatures (filamentous microalgae, foraminiferans, detritus, fish eggs, detritus, sand, minute crustaceans, small snails).

The conservation status of this blenny is unknown as sightings have been rare since it was first identified.

Yarrell's Blenny is named after the Victorian naturalist William Yarrell who first identified it from samples caught in Lock Broome and Berwick Bay. It is a little fish with a big character, hiding in rocks and through family breeding tailoring the colours to the location to help with camouflage on the sea bed. When it appears it's masked and crowned! It looks as if it's tied a Zorro mask around its head. Is the crown, those bright yellow/gold tentacles, for enticing a mate, food, deterring predators or all three? In keeping with the mask this is a fish with an air of mystery. Depending on which reference work you read you can find it around the British coast, you can't find it at all, seen rarely, mostly Scotland and Ireland, definitely of Scandinavian origin (it's a Viking!). There has been the odd sighting as far as Cornwall, but I suspect it was likely to have been on holiday. It eats everything and nothing. No-one can quantify (even generally) what the population of this species is. Somehow I think that so little is known about it is perfect. Small, masked, mysterious! How can you not be intrigued?

Fish #166 Yarrell's Blenny, *Chirolophis ascanii*, Chris Rolph
Oil on board 60 x 60 cm

The blenny is a fish from my childhood: the dark flitting shadow caught by the corner of your eye, seldom trapped in a net and transferred to a plastic bucket, before being released to its rockpool again. But blenny is used as a generic term, and I've since found that Yarrell's blenny is even more elusive than its intertidal cousins, choosing to live at depths of 20m or more and therefore rarely found in coastal rockpools.

I based my painting on a number of photographs; I wanted to capture its beady eye, downturned mouth, and of course its antler-like tentacles. Like the blennies I've caught on a crabline it has tiny razor-sharp teeth which you can see peeping behind its lips, and the dorsal fin runs the length of its long dappled body. Though this fish will fit comfortably in the palm of your hand I've exaggerated its size to emphasise the features of its face.

Yarrell's blenny is named after the publisher and naturalist William Yarrell (1784-1856), a colleague of Charles Darwin, with whom he helped to found the Zoological Society of London. His eponymous fish can be found all around the UK, where it hides among weedy rocks and shelters in crevices. Each fish's patterns are thought to be unique, like a fingerprint, and it can rest on its front fins on the sea bottom, where it feeds on tiny invertebrates.

Fish #168 Snakeblenny *Lumpenus lampretaeformis* Varjavan Dastoor

Soft pastels 23 x 30 cm

Fish #168 Snakeblenny

Lumpenus lampretaeformis

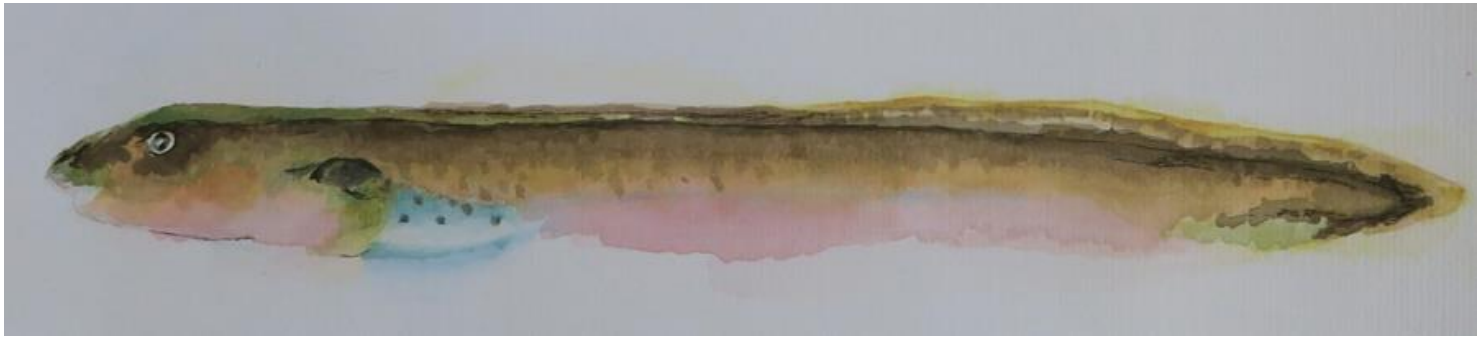
Kimberly Kay

Pen and watercolor 40 x 10 cm.

"I also come in yellow."

Snakeblenny

In the big blue sea
There's so much to see
The fishes are so many.
Under the seabed
You can glimpse the head
Of the slender blue snake blenny.
Born in spring
Sized a thumbnail
In the open water
It blindly sailed
Until it grew
Big enough to be found
By cod and pollock
And moved underground.
There it grew
to 'bout a foot in size
With a pointed tail,
Brown back,
And pearlish blue sides.
Endlessly digging
A network of burrows
In a tidy Y-shaped form.
Eating crustaceans
As the sea deforms
Previous tunnels
Before too long.
We want not from it
And it not from us,
So we know not much more,
At least not for sure,
'bout its way of life.
Yet the plastic we use
Soon turns to refuse
To befoul their benthic abode.
In the big blue sea
There's still much to see.
The fishes are so many.
A Y-shape on the bed
Means you may glimpse the head
Of the lovely blue snake blenny.



Fish #170 Vahl's Eelpout *Lycodes vahlii*
Vera Johnson
Watercolour 23 x 48 cm

Classification: Actinopterygii (ray-finned fishes), Perciforms (Perch-like), Zoarciae (Eelpots), Lycodinae.
Description: Body fairly elongate, covered with scales to bases of pectoral and pelvic fins. Dorsal fin without depression, front end with 0-3 black-brown spots. Lateral line runs near the anal fin. Size: usually 25-30 cm, up to 52cm.
Habitat/biology: Lives at temps of 0-5°C, on muddy bottoms at 150-500m, salinities 34-35‰. Feeds mainly on endobenthic prey, with shrimps and euphausiids more prominent prey as the size increases. Large eggs (few) of 6mm diameter.
Distribution: Arctic to Northwest Atlantic. Nova Scotia, Greenland, Scandinavia, southwestern part of Barents Sea.

Fish #171 Viviparous Eelpout, *Zoarces viviparus*, David Hall
Acrylic on panel 20 x 25 cm

On reading about the Viviparous Eelpout, I discovered that it suckles its young embryos while still within the mother's body, making it the only fish species to do so. Amazing!

Fish #172 Common Dragonet, *Callionymus lyra*, Lesley Morris
Slate

Fish #172 Common Dragonet *Callionymus lyra* Wayne Prosper Oil pastel 30 x 42 cm

The common dragonet, *Callionymus lyra,* is widely distributed in and around the seas of the UK, Europe and the coast of Africa. It feeds on a wide range of small crustaceans and marine worms, although they will alter their behaviour to feed on whichever food source is the most abundant. The fish has an elongated, scaleless eel-like body and flattened head. Eyes are located on the top of the head and the mouth is relatively large. In mature males the first dorsal fin is high and triangular and is often described as looking like a ship's sail. Females and immature males have much smaller fins. Males can grow to a length of 30 centimetres (12 in) while the females can reach a length of 25 centimetres (9.8 in). They can be found at depths from 5 to 430 metres (16 to 1,400 ft) however they are mostly found at depths of no more than 30 metres (100 ft). This fish is not currently an endangered species.

There are almost two hundred species of dragonet across the world, with many of these fish living in tropical waters and being extremely brightly coloured. The common dragonet is the most common species of dragonet in UK waters and while the females are dull in colour, the males can give their tropical counterparts a run for their money in the colour stakes during the breeding season, with orange, yellow and streaks of blue making them an extremely colourful fish. The male displays these bright colours to attract a female and they are known to mimic each other's swimming pattern prior to mating too - this is called their 'mating dance'.

This picture was inspired by a photograph taken by Kåre Telne and caught my eye because of its striking colours and by the obvious fact that it does indeed resemble a mythical dragon when its fins are fully extended. The picture was painted with oil pastels. My work, just like the ethos of #200Fish, is to highlight the beauty and indeed the fragility of our environment. I love all things sentient and by painting wildlife in their most basic and bare form, with no background I hope that more people will come to realise just how important it is for us as humans to stop destroying wildlife and habitats which for no other reason appears to be for greed, vanity and want of possession.
"We all spin on this planet in the same unchanging direction and our time here is precious. So why don't we all agree to protect habitats, protect life and in so doing, protect our planet because if we don't then we are surely destroying ourselves."

Fish #172 Common Dragonet *Callionymus lyra* Diana Copeland

Acrylic on canvas board 30 x 40 cm

The Common Dragonet

In days of old, or so I'm told, big dragons they breathed flame, I may be small, only eight inches tall, but I have a super name. 'CALLINOYMUS LYRA', which sounds so great, but I'm just 'Common Dragonet' to all my mates.

I'm an orangey-brown, spectacular fellow, with my fins in bands of blue and yellow. I live at the bottom of the Southern North Sea, on the Fairy Bank, which you'll agree, is a really good place for a Common Dragonet to be.

It may be cold, but I am bold, and am looking for a wife, I will puff my cheeks and raise my sail, I pose a bit, but to no avail, so far all I have attracted is a nosey snail.

When my sweetheart comes from February to April, we will get together; we'll swim and play and eat all day, and hope this lasts for ever.

We eat small crabs, slugs, snails and worms - I expect that diet would make you squirm. We love our home in the fine North Sea, we think it is fantastic; but here's a heartfelt plea from me, please don't fill it up with plastic.

Fish #173 Spotted Dragonet *Callionymus maculatus* Beverly Nel

Linoprint on a rolled ink background

The Spotted Dragonet can be found in the North Eastern Atlantic. It is also found in the Mediterranean, including the Adriatic and Aegean but not in the Black Sea. It is similar in shape to the Common Dragonet but smaller. It grows to a total length of 16 cm (6.3 in) in males and 13 cm (5.1 in) in females. Its large eyes are situated close to each other on the top of the head. It has a large, protractile mouth. It can be recognised by its two beautiful high dorsal fins (taller in males than in females). These, and its other fins are attractive, wispy, fan-like structures, which were a challenge to reproduce as a lino-cut!

The Spotted Dragonet is yellowish-brown in colour with a double row of obvious brown spots on the flanks interspersed with smaller blue spots. They are a benthic fish, swimming along the bottom of the sea, living off small invertebrates; mainly worms, snails and crustaceans. They are not endangered and only are caught sometimes as a bycatch, or for aquariums.

Fish #174 Reticulated Dragonet *Callionymus reticulatus* Susan Banks

Oil on canvas 18 x 25 cm

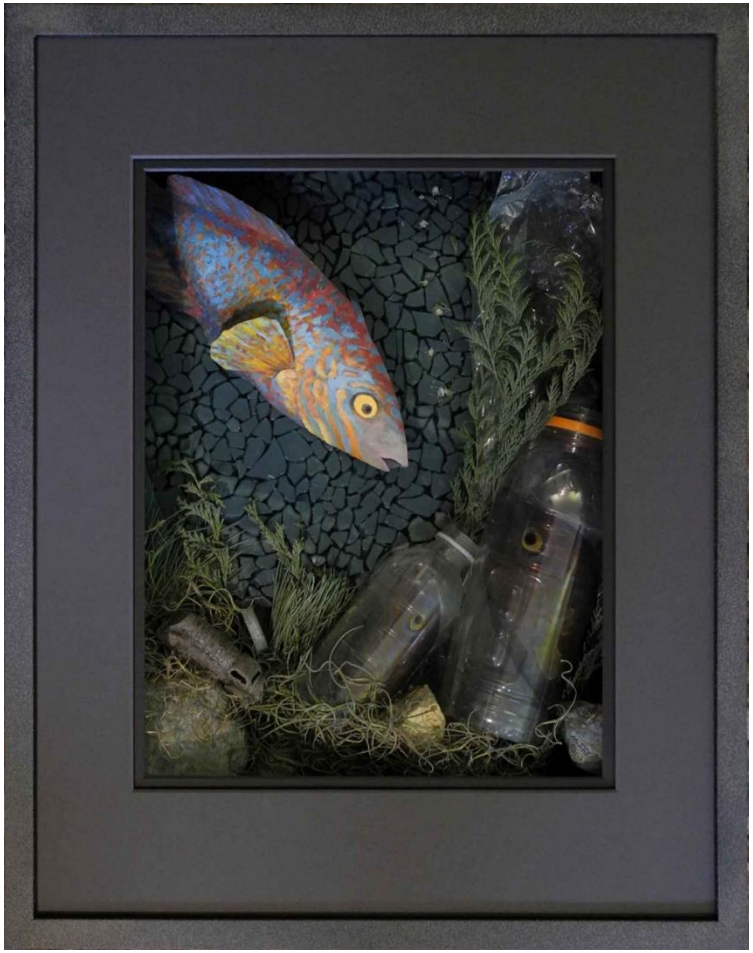
Size: Max.11cm males, max.6.5cm females

Habitat: Associated with shallow waters and soft ground. Found mainly on western shores, although recorded as far north as Scotland, and into the southern North Sea.

Food: Feeds on small crustaceans and worms.

I like my paintings to be visually unstable and this work is the antithesis of "a capture" of the subject. When seen in natural environment a fish must always be observed through the lens of water and all the stuff floating in it consequently its appearance must quite unlike its image in air when the creature is out of its element (fished up) and probably dead. Very diverse colours, shapes and transparencies appear in photographs from different sources. There is no true image to be fixed.

Possibly the nearest to the notion of "a capture" is a diagram that identifies parts but looks nothing like a real moving living fish. I like the name of this little fish which suggests both a dragon and a network; also it is of no particular interest to the fishing industry.



Fish #175 Rock Cook *Centrolabrus exoletus* Maria Sky. Mixed Media Assemblage 43 x 36 x 10 cm

The fish peers, with confusion and shock, at the two plastic bottles located at the bottom of the shadow box. Amongst the "seagrass" also lies a small metal toy truck and one plastic cap. The fish looks in disbelief, thinking of its life amongst the debris that has been tossed haphazardly, by humans, into the ocean, not thinking of what this is doing to the ocean's environment. This assemblage artwork is set against a mosaic of fireglass, and embellished with plastic bottles, plastic wrap, toy truck, dried plants, rocks and sand providing a variety of textures of this fish's environment. This particular combination of items is intended to show the infiltration of debris and plastics that are rapidly become common place in the Earth's oceans, symbolic of how polluted the Earth's waters have become, created by plastic waste as well as other items not suitable or sustainable for a viable life.

A Rock Cook (also known as 'small mouth wrasse') is a colourful small-sized fish found living among seaweeds and eelgrass beds located throughout the ocean waters of Britain and Ireland as well as in the eastern Atlantic from Norway to Portugal and Greenland. The maximum size of a Rock Cook is 15-18 cm (approximately 6 in). The body is greenish brown with cream undersides and the head is yellow-orange with blue stripes. It eats various crustaceans and is also considered a "cleaner fish" since it removes ectoparasites from other fish. It is ironic that this fish is a "cleaner fish", taking care of other fish, yet must live in a polluted ocean, due to the thoughtless humans with whom it shares its environment.

#175 Rock Cook, *Centrolabrus exoletus*, Tasha Easton
Watercolour 15 x 20 cm

The Rock Cook lives in most British waters, with the exception of the southern North Sea. It tends to live in shallow inshore areas among seaweeds (particularly eelgrass) and near rocks. It has a life expectancy of about 8 years. It is the rarest of the five UK wrasse species. It grows to about 15cm in length and is easily distinguished by five spiny rays on the anal fin. It is mostly greenish brown, but with flecks of blue or purple on the fins. Its sides are yellow-brown, with a cream underbelly. It has small, pointed teeth that project forward from the mouth. The Rock Cook feeds on small invertebrates and crustaceans and also cleans parasites from other fish. It is often used in salmon cages as a cleaner fish. The fish pair to breed, with the male building a dish shaped nest and guarding the eggs.

Fish #175 Rock Cook *Centrolabrus exoletu* Moira Buchanan

Mix Media on Upcycled Wood Panel 19 x 36 cm

The Rock Cook or Small Mouthed Wrasse *Centrolabrus exoletus* lives near rocks and amongst seaweed - notably eelgrass, on most coastline areas of Britain and Ireland. Also known as the 'Small Mouthed Wrasse' it feeds on small invertebrates and cleans parasites from other fish. Wrasse have thick pursed-lips that hold and pull shellfish from rocks. Their strong jaws and powerful teeth also allow them to crush through the hard casings of shellfish and softer shell of crustaceans.

Up to 15/18 cm in length.
Greenish brown with bright blue layers or flecks trapped in the fins
Blue/orange/brown scales throughout the body with yellow sides and cream underside.
Head gold-orange with blue and pink stripes.
Small head thick lips and large body

My chosen fish for #200 Fish has an interesting life cycle and is possibly "the rarest of the five U.K wrasse species" (British Sea Fishing). In the spring to summer months the females use crevices within rocks to hide their eggs nesting the young on a bed of fine algae. After a few weeks the eggs open and the larvae move along the surface of the water till they grow thus the cycle of the wrasse species is repeated. The Rock Cook, as with all species of wrasse, are protogynous hermaphrodites they begin life as female but over time, either remain female, or metamorphose to male. Because their habitat is within shallow waters they are prone to being caught by sea anglers. Except from environmental alterations by natural cause or human pollutants there is currently no known threat to the Rock Cook. Commercial value of this fish as a menu dish is not popular, however, the species of wrasse has merit as a 'cleaner fish' for salmon fisheries. So far, no conservation measures are in place for the Rock Cook, nevertheless its habitat weaves alongside other protected marine life within its environment. Note: The Rock Cook can also be found in the Eastern Atlantic from central Norway southwards to central Portugal.

By utilising upcycled wood from a palette and referencing a plastic bag drawn and painted onto the wood canvas, I was making a direct evaluation of human content of the ocean. In recent years the pollutants caused by us appear to be reaching dangerous levels. Obviously other dangerous elements from hard plastics (bottles, containers), metals, chemicals etc are as hazardous to the marine environment. I feel angered and disappointed at the lack of responsibility we have in the care-taking of our most precious resource - the ocean and its inhabitants.

Fish #176 Mediterranean Rainbow Wrasse *Coris julis* Gareth Shaw Watercolour, coloured pencil and acrylic 30 x 40 cm

Biology
The Mediterranean rainbow wrasse occurs in the coastal zone, near rocks and sea grass meadows. It can be found at up to 60 metres in depth, but old males stay in deeper waters, especially during winter. Just like other species of its family, it is hermaphroditic, females being able to convert into males whenever it is necessary. The Mediterranean rainbow wrasse is a sometimes solitary fish that, when scared, buries itself in sand.

Curiosities
The Mediterranean rainbow wrasse has no scales on the head, or on the base of dorsal and anal fins.

I chose this fish as it is a colourful little visitor to our waters, and was a delight to capture in watercolour and pencils.

Fish #177 Goldsinny Wrasse *Ctenolabrus rupestris* Beatriz Garrido.
Coloured pencils 15 x 21 cm

This is a little Goldsinny wrasse. Let's call him Bob. Its scientific name is *Ctenolabrus rupestris*, which sounds both impressive and impossible to pronounce. It's a remarkable name for a remarkable little fish. This species is present from central Norway southwards to Morocco, including the United Kingdom, Ireland and the southern Baltic Sea. We don't have to worry about them, as they don't seem to be endangered. We still have to look after them though! They are one of the smallest wrasse found in UK waters. They rarely exceed six inches and a few ounces of weight. Their trademark is a black spot located on the dorsal fin and top of the tail. Fun fact! - All wrasse are born female and remain female for the first part of their lives. So Bob was also Bobbie at some point in his/her life.

Fish #178 Ballan Wrasse *Labrus bergylta* Alison Jackson Wet and dry felted and embroidered.

Ballan Wrasse are the biggest common wrasse around the U.K. coastline. They are protogynous hermaphrodites, which means they are all born female and remain so for the first part of their lives. Slow growing, they reach 6in in length by 2 years and reach maturity at 6 years and almost two feet long, when half of them transform into males.

Ballan wrasse have a deep set compressed body and a large head with thick, protruding lips. Teeth tend to be rounded with age. Their long dorsal fin has an array of spines along the first half, followed by a much softer section towards the tail. As well as sharp teeth in the mouth they have teeth in their throats too. This enables them to prise molluscs and crustaceans from rocks and crush them. They feed predominately on crab, mussel, shrimp and worms. Colouration varies greatly. They can be brownish red or red with numerous small white spots. They can be green with white spots or irregular large vertical dark stripes. Young are often bright emerald green. Ballan wrasse are common off all British coasts. They are found in inshore waters amongst weed covered rocks, or in lower shore pools. They are also found in the algal zone on rocky coasts at a depth of between 5 and 30 metres.

There are no external differences between the sexes. They all start off as female and continue to feed and grow until they reach the age of 6-8 when they will be mature enough to breed. They will breed as females for many years and after this time some females will change sex and function as males, fertilising the eggs of the females. They will then grow to a larger size than the females. Females make nests of seaweed and mucus which they wedge between rocks. They defend the nest aggressively. It is here that they lay their eggs, which hatch in a few weeks. The emerging larval wrasse float away with the plankton to settle in shallow water.

Commercial value is increasing and Ballan Wrasse are now being sold to Japanese restaurants, where they are processed as sashimi. There is also a fishery for live Ballan Wrasse, which are used as cleaner fish in salmon farms.

The Ballan Wrasse

The Ballan Wrasse of rainbow hue,
Red, brown, green, yellow, orange and blue,
Stripey and spotty, pale underneath,
Mick Jagger lips and Ken Dodd teeth.

Munching on molluscs, crunching on crabs,
Mussels and barnacles, all up for grabs.
Two sets of gnashers are better than one,
If the first doesn't get 'em, the second one can.

Mama Wrasse lays her eggs in rocks lined with weed,
Papa Wrasse passes by, releases his seed.
There's no doubting what each egg will become,
Always a daughter, never a son.

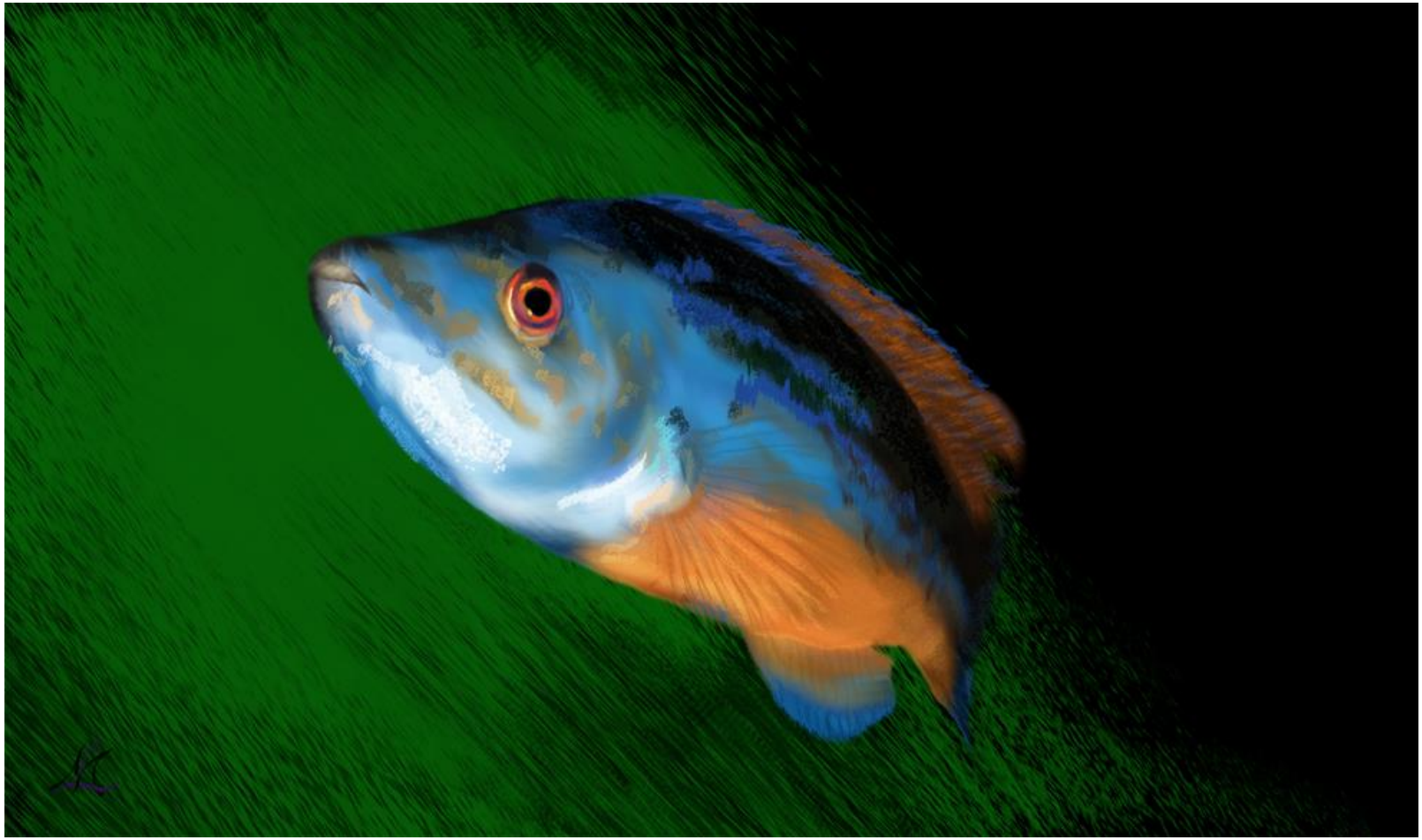
Several years later, no need for an op.
Trans sexuality in fish is no prob.
For some girlies a new life as boys now begins,

Fish #179 Cuckoo Wrasse

Labrus mixtus

Mark Loosemore

Dugital art



The name cuckoo wrasse comes from the Cornish fishermen who associated the blue markings with bluebell flowers. In the Cornish language, a bluebell is 'bleujenn an gog', literally 'the cuckoo flower'. Cuckoo Wrasse are native to the Eastern Atlantic from Norway to Senegal and are therefore frequently encountered around the British Isles. These fish live in deeper water than some other wrasse, usually from 10 metres down to 30 metres. That is not to say, however, that they do not come into shallower waters. They are commonly found amongst sea fans and branching sponges on rocky shorelines. The males and females are very different in colouring. The males are bright blue with long patches of orange and yellow along the body. Unlike this illustration of a male Cuckoo Wrasse the female is bright orange with black and white stripes above the tail. The male can reach sixteen inches while the females are slightly smaller achieving twelve inches overall. Wrasses are highly territorial fish with a single male courting several females. When the male dies the dominant female changes sex and becomes the next male! As the female changes sex she also changes colour and patterning to that of the male!

Anecdote from the artist:

I grew up in Dorset during the fifties only a few miles from the coastal resort of Weymouth. In those days, before my family owned a car and when rail fares were still affordable, I spent many happy hours fishing from the Stone Pier which juts out into Weymouth Bay. My aim or should I say, hope, was to catch mackerel which would have been taken home for the table. Unfortunately those silver and blue rapiers did not frequent the waters adjoining the pier. The occasional mullet and Sea Bream and a never ending supply of Ballan and Cuckoo Wrasse were the most frequent visitors to the rods of amateur anglers. While I now know that adult Cuckoo Wrasse are a food fish, at the time I did not. Fortunately for the many juvenile specimens on my hook they were always returned to the sea. I meanwhile returned home after another day spent in the seemingly endless sunshine of childhood.

Fish #179 Cuckoo Wrasse *Labrus mixtus* Sue Locking Acrylic 31 x 23 cm

Without doubt, *Labrus mixtas*, the Cuckoo Wrasse, (previously known as *Labrus bimaculatus*), is Britain's most colourful and magnificent fish.

This vibrantly-coloured fish was renamed by Cornish Fishermen, who associated the bright blue markings with bluebell flowers, the Cornish name for these being 'bluejenn an gog' (a cuckoo flower).

Members of this wrasse family are slim-line with a narrow head; have scaly bodies (the scales are moderate in size, and rather smaller than the pupil diameter of the eye); two parasitic isopods (probably Anilocra frontalis); long dorsal fins, and robust, flattened, strong teeth, both in the jaws (for biting and rasping) and on the pharyngeal bones in the throat (for gripping and crushing). This enables them to mainly feed on barnacles, other crustaceans and molluscs, but they also consume small fish and worms. The thick, protruding lips, made up of 7-9 folds, gave rise to the name Labrus, from the Latin, 'Labrum' for lip, rim, or edge. Weighing a maximum of 2 pounds (0.907 kilograms), the male reaches between 35-40cm (14-16 inches) in length, the female up to 30cm (12 inches), and the average life span is around 20 years.

The magnificently coloured male has a royal blue head with bright electric blue bands and blotches along its flank, 2-3 darker blue spots and a black stripe interspersed with white near the dorsal fins. The rest of his body is vermillion, as are the fins, which also have brilliant iridescent blue markings at the tips, and the tail fin also has blue markings at the base. The female is duller in colour, usually rose-pink/orange coloured, with two or three dark spots behind the dorsal fin, and no bands or blotches along the body. Younger males do not have the dorsal spots, are similar in colour to the females, and can often be found in pairs.

The male colouration changes during the breeding season, becoming even brighter and sporting a white patch on his head, whilst his head turns from blue to orange so as to attract as many females as possible. There is distinct pairing during breeding, and between May-June, being oviparous, the female lays around 1,000 eggs in a dish-shaped nest made of algae built by the male on the seabed, which the male then guards until the eggs hatch in about 1-2 weeks. The young live in the open water until the autumn, when they then settle near the seabed. Although being sexually dimorphic, when young, all cuckoo wrasse have the female's pink/orange/red colouring, but when they reach between 7-13 years of age, because they are also protogynous hermaphrodites, they can then change gender and colour; similarly, if the dominant male dies, one of the larger females changes gender; sex reversal is completed within about seven months, and this new male then takes control of the harem.

Existing in around 30 countries, having been found as far north as Sweden, as far south as Senegal, The Azores, Madeira and the Canary Islands, as far east as Turkey, and most westerly as Ireland , it inhabits the Atlantic Ocean, the Irish Sea, the North Sea, the western Baltic Sea, and the Mediterranean Sea. Preferring to live at depths between 40 and 80m (130-260ft), it can live in as little as 2m (6.6ft) in warmer waters, and as deep as 200m (9656.2ft), but is most often found amongst algae in rocky shores in spring and summer, and at depths of around 15m (49ft) during winter.

Listed by the I.U.C.N (International Union for Conservation of Nature) as being of 'least concern', it is both encouraging and exciting that this little gem of a fish is likely to be around us for a very long time. An important food source; in addition to being a 'game' fish, it is a very popular addition to public aquaria, where its bewitching beauty astounds visitors, and makes it the most memorable of the wrasse family.

Without doubt, this is a very fascinating, complex, and exquisite fish, and who would have ever guessed that such a resplendently-hued fish, (which ilk one would normally associate with tropical oceans or coral reefs), was right here in British waters? Wow!!

Fish #180 Corkwing Wrasse *Symphodus melops* Di Hennell Watercolour 21 x 29 cm

I chose it because I loved the orange / turquoise pattern on the fish.
Sadly, since 1988, these fish are exploited as they are being commercially used in salmon farming. They naturally feed by removing parasites from other fish, and this is why Salmon farmers are using them.

Fish #182 Skipjack Tuna *Katsuwonus pelamis* Wendy Ronaldson

Acrylic 41 x 51 cm

Skipjack Tuna are also known as the Katsuwonus Pelamis a medium sized perciform fish in the tuna family Scombridge. Skipjack can grow to a length of 3 feet and can live as long as 8-10 years and are the most abundant of the major commercial tuna species. They have streamlined bodies and are almost scale less. They have a wonderful dark purple-blue back and their lower sides and bellies are silver with four to six dark bands. They are found mainly in the tropical areas of the Atlantic, India and Pacific Oceans with the greatest abundance near the equator. At night skipjack are surface swimmers and by day they can dive up to 850 feet. Large schools of adult skipjack tuna often mix with juvenile yellowfin and bigeye tuna. They may also show a characteristic behaviour like jumping, foaming, feeding, etc. Skipjack tuna eat varies prey, including squids, small fishes, crustaceans and other vertebrates, cannibalism is also common. They rely on their speed to outwit and bite prey as they have no suction power. Skipjack tuna spawn throughout the year in the tropics and eggs are released in several bouts, although widespread and heavily fished skipjack tuna is not a conservation risk.

The origin of the name skipjack tuna was first described in 1758 by Carl Linnaeus who named it Scomber Pelamis. The species name is derived from Latin, meaning, 'Tunny' which refers to fish. There was a big-game tunny club founded in 1933 in Scarborough which had its headquarters there. The Atlantic Bluefin tuna known as tunny in Britain at the time is a large and powerful fish which was a target for big game fishermen.

Skipjack tuna sits at the back of the leader board when it comes to artists depictions of tuna fish. Yellowfin tuna seems to be the most popular among artists. Its yellow fins, tail along and the anal fins which can grow very long in mature species are aesthetically beautiful; their bright colour brings sunshine with sleek elegance almost too good to eat. I never really thought of tuna fish as a living creature, I always saw it as canned food. Delicious as it is, I never quite see it in the same way now I have been to The Deep in Hull. I was mesmerised by them, I spent hours watching and photographing the tuna swimming by in those huge glass tanks. I wanted to take them home with me, transport the tank and sit it in the living room so I could watch them all day. My friend had to ask me politely to leave as her feet were aching. That is why I chose skipjack tuna for the project.

Fish #183 Plain Bonito *Orcynopsis unicolor* Joanna Urbani

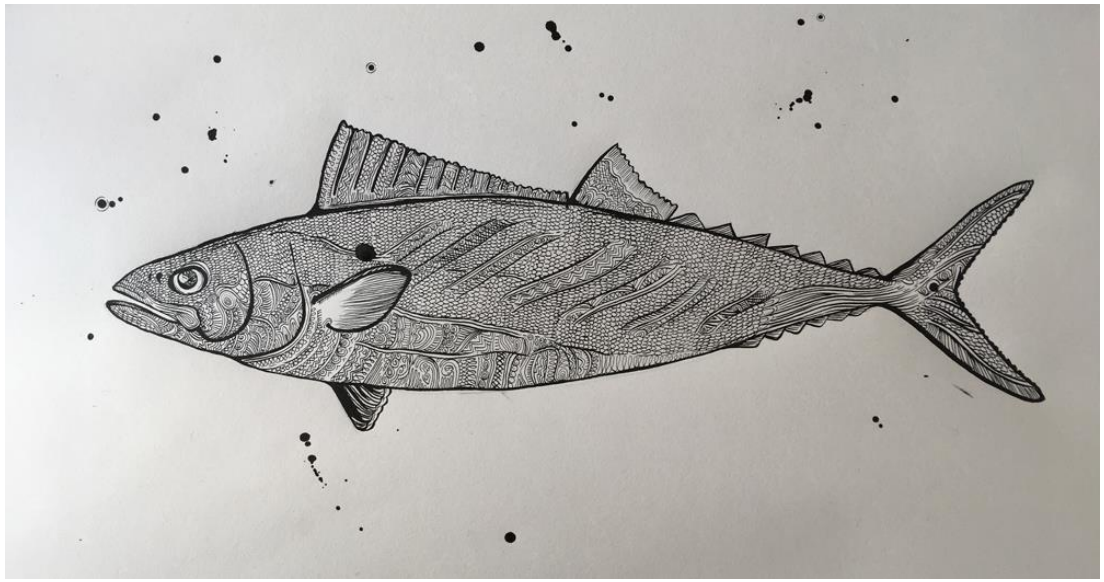
Mixed media 28 x 36 cm

The Plain Bonito is a Perch-like ray-finned fish. It can be found in the Eastern Atlantic, from Oslo, Norway south to Dakar, Senegal but the range is centred in the southern Mediterranean Sea. At maturity they range in size from 70cm up to a maximum of 130cm, with a maximum published weight of 13.1kg. They have between 12-14 Dorsal spines, 12-15 Dorsal soft rays and 14-16 Anal soft rays. They have a rather large mouth with the upper jaw reaching as far as the hind margin of the eye. A female weighing 5 or 6kg may carry up to 600,000 eggs, which are spawned in portions.

They form small schools at the surface of the water, and the first dorsal fin stands out of the water similar to that of sharks. They feed on small fishes such as sardines, anchovies, jacks and mackerel. The Plain Bonito is fished mostly by Algeria, Morocco, Tunisia and Libya. It is marketed canned or frozen. Their current population level is thought to be stable.

I chose the Plain Bonito largely because of it's name. Always the champion of the underdog I felt a bit sorry for a creature with such an undramatic and unflattering sounding name and I got thinking that he (because he is definitely a he in my mind) could actually be leading a very colourful life as, for example, a member of a fishy Mafia-type mob.

The Plain Bonito (see, you're looking at him with different eyes now, aren't you?!), quietly swims amongst his friends, anonymous and ready to strike his target, a dodgy anchovy. He then disappears quickly and silently back into the cover of the gang. Remember though, he's only working for the mob to support and protect his 600,000 babies!



Fish #183 Plain Bonito, *Orcynopsis unicolor*, Kate Webber
Ink drawing

Fish #184 Atlantic Bonito, *Sarda sarda,* Cathi Prince
Leaded stained glass with copper foiled and etched detailing, the main fish being of fused glass. 34 x 59 cm

The Atlantic Bonito is a large mackerel-like fish of the family Scombidae, commonly found in the shallower waters of the Atlantic Ocean, Mediterranean and Black Seas, normally travelling in fairly large schools. It grows up to 12 pounds in weight and 30 inches in length. With a similar body shape to the tuna, it is mainly silver and blue/green with black stripes. To breathe it needs to be perpetually swimming with open mouth to maintain ventilation. They feed on smaller fish such as mackerel, squid and sea lance, and will often jump on the sea's surface to catch them. They, in turn, are predated by larger fish such as tuna and marlin. In America the Atlantic Bonito is treated as a game fish while in various Mediterranean countries it is eaten grilled or baked.

It was the striping of the Atlantic Bonito that attracted me as a fish to depict allowing me to play with the medium of glass. While working in my studio there is the constant sound of water from the pond just outside and the sounds of large fish slurping, leaping and splashing. Over the past ten years that I have been working with glass I have variously been depicting fish, often in fantasy tropical colours and patterns, so working on this bonito pushed the boundaries a bit further.

Fish #185 Atlantic Mackerel, *Scomber scombrus*,
Karen Hoyle Painted Silk 38 x 53 cm

Atlantic Mackerel

Morning tide, sun begins to rise
Anticipation ...of the shoal to arrive
Cast the lures, rhythmically retrieve before it all...
Kicks off!
Explosive excitement
Rod nods intensify with each reel
Eventually revealing their magnificence in the shallows
Landed, barbecue and bait, it was worth the wait.

Fish #185 Shoal of Atlantic Mackerel *Scomber scombrus*
David Andrews

Fish #185 Atlantic Mackerel *Scomber scombrus* Lynda Parker
Digital photography manipulation

I live in Blyth, Northumberland on the Northeast coast. The mackerel is synonymous with my summers both as a child and an adult. We have spent many hours sat at the end of the pier watching the sun rise and trying the 'spin' for this beautiful (and very tasty) fish. For us, the first sight of the sand eels it feasts on is a sign that Summer is here. As a photographer and artist, the colours and pattern of their skin fascinates me.

Fish #185 Atlantic Mackerel, *Scomber scombrus,* Fiona Gurney
Glass mosaic 29 x 53 cm

Mackerel with their wavy patterned skin and iridescent flashes of colour translate well into mosaic, light glints off the shards of glass, always shiny as if fresh from the sea.

Fish #185 Atlantic Mackerel *Scomber scombrus* Janet Swift Watercolour and goache 20 x 28 cm

THE MACKEREL WEDDING

'Mac' Mackerel was a swarthy fish,
He'd swum in oceans foreign.
From Aberdeen came his whelk-shell hat
And from Mablethorpe his sporran.

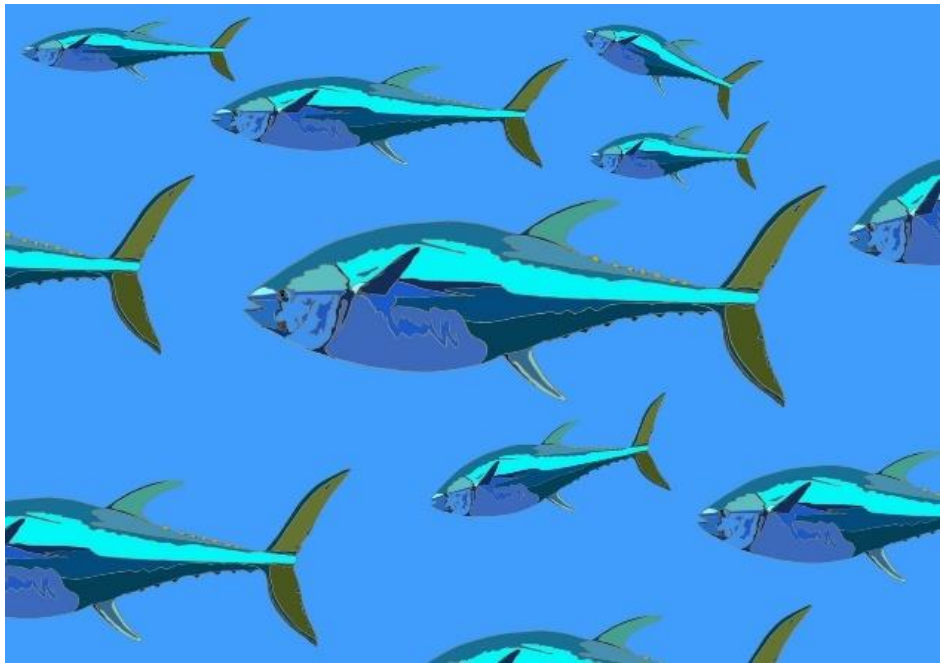
Miranda was a stunning lass
Who stood out in a shoal.
Their fish-eyes met, they fell in love,
This wedding was their goal!

Sea horses were her bridesmaids here,
(Best friends since they were girls).
They held aloft her floating veil
And much admired her pearls.

The seabed folk all came to watch.
Small fish swam from the shores.
The peacock worms all waved about,
The crabs they clicked their claws!

But HARK! What makes that beauteous ring
That welcomes groom and bride?
Why, an underwater replica
Of the bell of TIME and TIDE!

Rejoicing on the North Sea bed,
Such food! - so many dishes!
(You need reliable caterers
When there are 200 Fishes.!)



#186 Atlantic Bluefin Tuna, *Thunnus thynnus*, Jo Mortimer Digital drawing 20 x 28 cm

The Atlantic bluefin tuna (Thunnus thynnus) is a species of tuna in the family Scombridae. It is variously known as the northern bluefin tuna, giant bluefin tuna (for individuals exceeding 150 kilograms or 330 lb) and formerly as the tunny. Atlantic bluefin are native to both the western and eastern Atlantic Ocean, as well as the Mediterranean Sea. Atlantic bluefin have become extinct in the Black Sea. It may exceed 450 kg (990 lb) in weight. Besides their commercial value as food, the great size, speed, and power they display as apex predators has attracted the admiration of fishermen, writers, and scientists. The Atlantic bluefin tuna has been the foundation of one of the world's most lucrative commercial fisheries. Medium-sized and large individuals are heavily targeted for the Japanese raw fish market, where all bluefin species are highly prized for sushi and sashimi. This commercial importance has led to severe overfishing. The International Commission for the Conservation of Atlantic Tunas (ICCAT) affirmed in October 2009 that Atlantic bluefin tuna stocks have declined dramatically over the last 40 years, by 72% in the Eastern Atlantic, and by 82% in the Western Atlantic. Most bluefin are captured commercially by professional fishermen using longlines, purse seines, assorted hook-and-line gear, heavy rods and reels, and harpoons. Recreationally, bluefin has been one of the most important big-game species sought by sports fishermen since the 1930s, particularly in the United States, but also in Canada, Spain, France and Italy. The body of the Atlantic bluefin tuna is rhomboidal in profile and robust. The head is conical and the mouth rather large. The head contains a "pineal window" that allows the fish to navigate over its multiple thousands-of-miles range. The colour is dark blue above and grey below, with a gold coruscation covering the body and bright yellow caudal finlets. Fully mature adult specimens average 2-2.5 m (6.6-8.2 ft) long and weigh around 225-250 kg (496-551 lb). The largest recorded specimen taken under International Game Fish Association rules was caught off Nova Scotia, an area renowned for huge Atlantic bluefin, and weighed 679 kg (1,497 lb) and 3.7 m (12 ft) long. They reach maturity relatively quickly. In a survey that included specimens up to 2.55 m (8.4 ft) in length and 247 kg (545 lb) in weight, none was believed to be older than 15 years. However, very large specimens may be up to 50 years old. The bluefin possesses enormous muscular strength, which it channels through a pair of tendons to its lunate-shaped caudal fin for propulsion. In contrast to many other fish, the body stays rigid while the tail flicks back and forth, increasing stroke efficiency. It also has a very efficient circulatory system. It possesses one of the highest blood haemoglobin concentrations among fish, which allows it to efficiently deliver oxygen to its tissues; this is combined with an exceptionally thin blood-water barrier to ensure rapid oxygen uptake. To keep its core muscles warm, which are used for power and steady swimming, the Atlantic bluefin uses counter-current exchange to prevent heat from being lost to the surrounding water. Heat in the venous blood is efficiently transferred to the cool, oxygenated arterial blood. While all members of the tuna family are warm-blooded, the ability to thermoregulate is more highly developed in bluefin tuna than in any other fish. This allows them to seek food in the rich but chilly waters of the north Atlantic. Bluefin dive to depths of 500 m (1,600 ft). They can reach speeds of 40 mph (64 km/h). The Atlantic bluefin tuna typically hunts small fish such as sardines, herring, and mackerel, and invertebrates such as squid and crustaceans. Female bluefin are thought to produce up to 30 million eggs. Atlantic bluefin tuna spawn in two widely separated areas. One spawning ground exists in the western Mediterranean the other is in the Gulf of Mexico. They return to the same area and group together in large concentrations to spawn, and at such times are highly vulnerable to commercial fishing. This is particularly so in the Mediterranean, where the groups of spawning bluefin can be spotted from the air by light aircraft. In 2010, Greenpeace International added the northern bluefin tuna to its seafood red list.

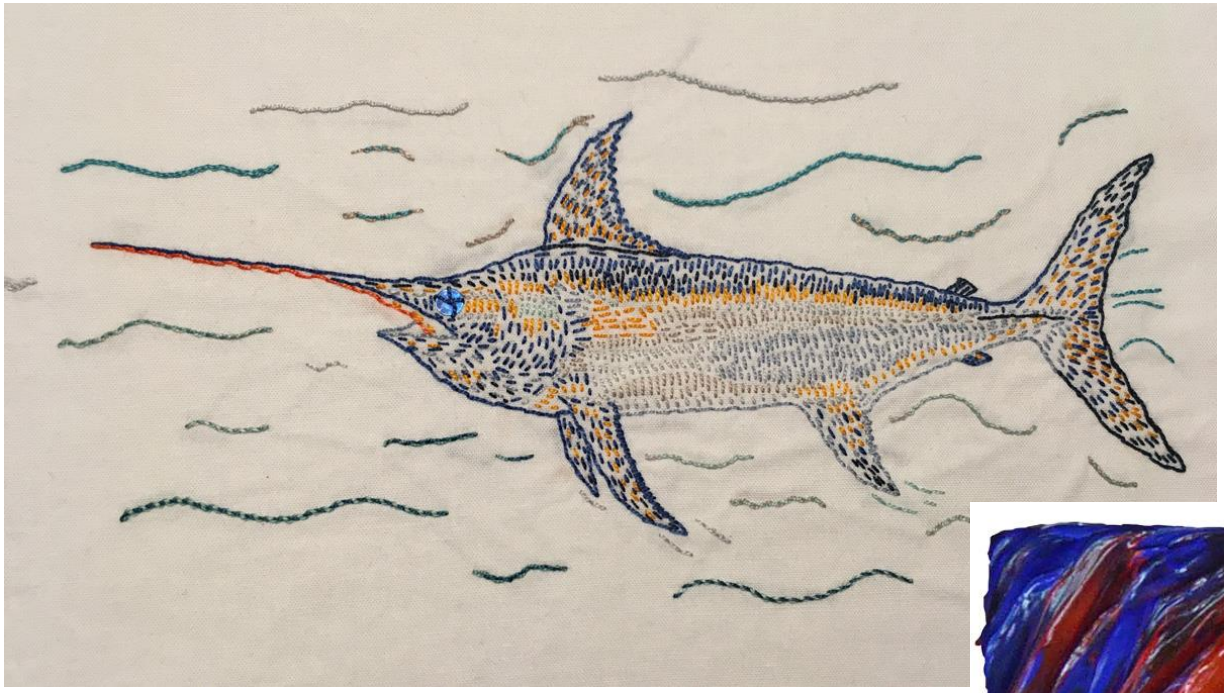
Atlantic Bluefin

There's a tear underwater, shadows
breaking loose. Blue on blue.

School's out and tuna
are on the move.
Each a weightless heft
of muscle and bone.
Eyes flush to skin,
retractable fins.
Bullet-shaped torpedoes
fired by the machinery
of stars and moon.
Blood banging in their head
as they sense shoals
of mackerel and herring.

Shifting up a gear they become
a blur in their fragile world.

Paul Mortimer



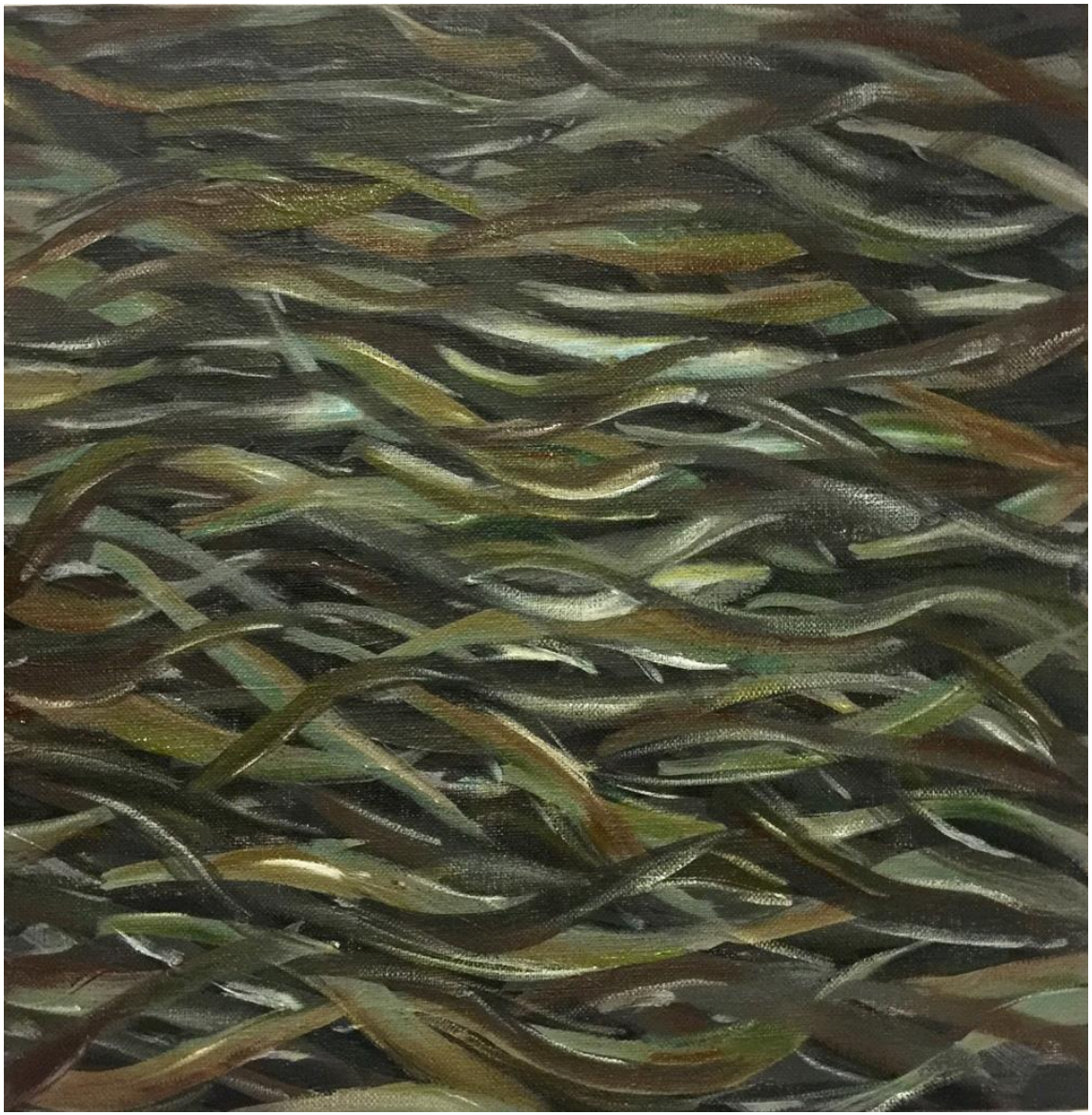
Fish #187 Swordfish *Xiphias gladius* Rodney Marsh
Embroidery, cotton material with cotton threads 21 x 27 cm

Swordfish often grow to reach 3 to 4 metres in length and can weigh up to 650kg. The female is usually larger than the male. They live for around 10 years. They prefer to live in warmer waters of between 10 and 240C but are often found in colder water temperatures down to 50C. The sword or bill is not used to spear prey but used to slash of injure the prey making it easier to catch and eat. Swordfish live on a wide range of prey such as Herring, Mackerel, Hake, Rock Fish and Squid. Spawning usually occurs in warmer waters and can be year round depending on location. The female can lay between 1million and 20 million pelagic eggs.

Fish #189 Small Sandeel, *Ammodytes tobianus*, Danny Mooney
Oil on board 5 x 15 cm

'Small Sandeels and Puffin'

Nature is a wonderful thing and everything is interconnected. For example, sandeels and puffins live in a symbiotic relationship. The puffins help the sandeels fly. The sandeels help feed the baby puffins. They have a lot to teach us about harmony and co-operation.



Fish #190 Smooth Sandeel
Gymnammodytes semisquamatus
John Wyatt Clarke
Oil and acrylic on canvas 30 x 30 cm

Sandeels are common but this one charms me because it's quite mysterious and not much is really known about it. It's not important enough for science to have defined its range or habits, it's just lumped into the sandeels and most of what is written about it is assumptions based on more important sandeels. But the one thing that is known for sure is that it must be an important part of the diet of many larger fish, mammals and birds. Being so integral to the foodweb in nature and so irrelevant to humanity gives it a humble charisma that's irresistible. The painting operates on the power and character of anonymity.
It's found in coastal seas from Spain up to Norway and in the Mediterranean, and prefers to live over shell-gravel. It's a summer mass-spawner and swims in shoals, and can be anything from 15cm to 30cm long. Beyond these facts, there is 'a paucity of information' about everything else - its life history, population, and ecology.

Fish #191 Greater Sandeel Hyperoplus immaculatus
Fiona Barnes Crochet

Fish #193 Atlantic Wolffish *Anarhichas lupus* Alison Rattigan

Acrylic and collage 40 x 60 cm

They are also known by other names including Sea Wolf, devil fish and sea cat. It is a marine fish from the Wolffish family *Anarhichadidae*. Its numbers are rapidly depleting due to overfishing and bycatch and thus this is causing concern to the National Marine Fisheries Service. What's really cool about this fish is that they produce a natural anti-freeze to keep their blood moving fluidly in their very cold habitat. Both male and female are involved in brood bearing and they have large sized eggs compared to other fish their size.

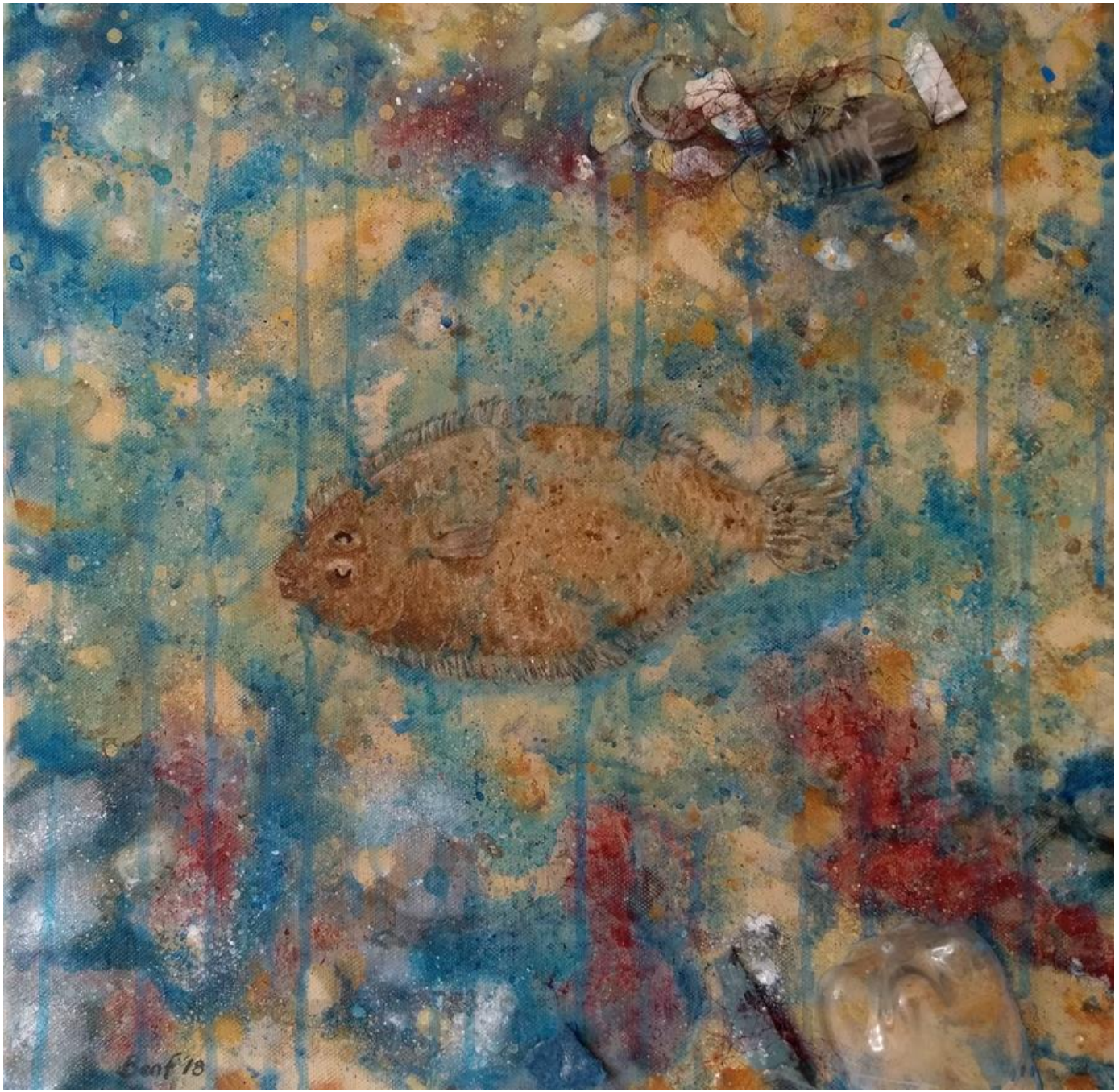
Fish #194 Lesser Weever *Echiichthys vipera* Wes Finch. Pen, crayon, watercolour & acrylic paint 45 x 35 cm.

The Lesser Weever is a venomous Weever of the family *Trachinidae*. It grows up to 18 cm long, but generally less than 15 cm, and is generally found on the sandy sea beds of the open sea, near the shore. Lesser Weevers may sting swimmers badly if disturbed in the water, and fishermen when they clean their fishing nets. They are typically found resting on the bottom, partially buried with eyes and tip of first dorsal fin exposed. I've never seen it in the flesh but I certainly felt the effects of its venomous spine when stepping barefoot on one when surfing off the Gower coast in South Wales. The pain in my toe was intense and lasted for about half an hour. Luckily, the locals told me it was a common occurrence and assured me it wasn't fatal!

Fish #195 Greater Weever, *Trachinus draco,* Shena McGrath
Acrylic on canvas 61 x 76 cm

I have lived on the edge of the North Sea for 24 years, mostly on the dry bits, but on occasions I have dipped my toe in it during summer months. Having researched the Greater Weever Fish, I will be rather cautious of where I tread from now on! The name 'Weever' is thought to have derived from the Anglo-Saxon word 'Wivre' which means Viper. (Sounding nasty already). For good reason is it named thus, it has a set of extremely pointy dorsal spines on a modified dorsal fin which it can keep flat and out of harms way, or lift erect when feeling miffed. If trodden on, the victim will experience an excruciatingly painful sting, swelling and redness which has, on rare occasions, been fatal. The only reliable and simple way to relieve the pain is by plunging the affected part into very hot water (>40 C). The Greater Weever, or 'Trachinus Draco' likes to hide itself on the bottom of the sea, often in shallow water (very sneaky) and one can understand why J K Rowling decided to name Harry Potter's arch enemy 'Draco Malfoy'. It can grow to more than 25cm long and it is widely found in the Northeastern Atlantic, the Black Sea and the Mediterranean Sea.
Oh, and another thing, you can eat it.....VERY CAREFULLY!

Fish #196 Mediterranean Scaldfish,
Arnoglossus laterna.
Ben Fitton
Acrylic and found object on canvas 40 x 40 cm



the Mediterranean scaldfish, is sometimes just known as a Scaldfish, and belongs to the left eyed flatfish family. It's of little commercial interest to fisheries and is usually discarded if caught. This might be the reason why I couldn't find much information on this fish, and not many images of it either.

What I did learn was that the Scaldfish is found in the Eastern Atlantic of Europe and Africa, as well as the Mediterranean. It lives on mixed or muddy bottoms, up to 200 metres down and feeds on small fishes and invertebrates. It grows up to 25cm in total length and it's conservation status is of 'Least Concern'.

My painting is in Acrylic and found objects on canvas. I created a series of works on goldfish many years ago so jumped at the chance of being involved in this great project. The painting changed many times as I tried to cope with the lack of pictures and other resource material to hand. At one point, I started carefully painting items of rubbish onto the canvas with the idea that I wanted to address the issue of pollution in our oceans and seas. This didn't really work so instead, I decided to use actual bits of plastic rubbish that I found during a walk along a beach. I struggled with the task of gluing rubbish onto one of my canvases, but then, not as much as I struggle to understand the mentality of people who drop rubbish or allow this pollution to enter our seas in the first place.

Fish #197 Witch, *Glyptocephalus cynoglossus,*
William Pavitt
Gouache 40 x 50 cm

Fish #197 Witch *Glyptocephalus cynoglossus*
Sally Harman

Fish #199 Atlantic Halibut *Hippoglossus hippoglossus* Jenny Sanderson

Textile and up-cycled plastic bottles 55 x 105 cm

The Atlantic Halibut is the largest species of flatfish on the planet - with the record fish weighing more than a baby African elephant! (3metres long and weighing 233kg) The Atlantic Halibut population has declined throughout its range over the last 200 years. Atlantic Halibut are particularly vulnerable to over-fishing because they grow slowly and mature late and some populations have almost been wiped out in many areas. The Atlantic Halibut has a relatively slow growth rate and only reaches maturity at 7 to 8 years old (males) and 10 to 11 years for females. Their spawning is seasonal, with the breeding season varying from place to place. After spawning, they migrate northwards in search of food.

Like other species of flatfish, Halibut are flattened sideways and lie on one side of their body. As a result, both eyes migrate to one side of the head during development. The Atlantic Halibut lies on its left side and has both eyes positioned on its right, facing upwards.

Atlantic Halibut are also farmed, and in Scotland are bred and grown in land-based tanks until they reach harvest size at 4 years. Some Scottish farms use organic feed that doesn't put pressure on wild fish stocks and MCS promotes them on their Fish to Eat list.

Halibut has long been prized as a food for its delicate flavour and meaty texture - being a cookery teacher here follows a recipe!

Halibut with lemon butter

4 halibut chunks, weighing approx. 200g/7¼oz each
2 lemons, juice only
110g/4 oz butter
Salt

Method

1. Score the fish with a sharp knife and marinate in the lemon juice for about 15 minutes.
2. Drain, reserving the lemon juice, and dry with kitchen towels.
3. Melt 75g/3oz butter in a large frying pan, making sure the heat is gentle and the butter doesn't burn.
4. Cook the fish in the butter for approximately 3-4 minutes on each side.
5. Increase the heat and pour in the lemon juice from the marinade; allow to bubble and evaporate slightly.
6. Add the remaining butter to thicken the sauce.
7. Serve immediately.

Fish #200 Common Dab *Limanda limanda* Ruairidh Greig Acrylic 25 x 30 cm

One of the humble "flattie" species we used to catch and eat on holiday at Humberstone Fitties back in the 1950s, I remember the "T" shaped devices with protruding six-inch nails through the cross piece that some people used to spear them with - and the stories of those who managed to spear their own feet. People also used throw lines to catch them with up to a dozen hooks on each line baited with ragworms dug up from the sands. On at least one occasion I remember feeling one wriggle under my foot in the creek, next to the rusting breakwater which stretched out to Haile Sand Fort. I pressed my foot down hard and then bent down and picked it up by the fins. About a dozen others followed that one into my haversack by the same means. I fried them at home that evening, Dab, Plaice and Flounder. All the family agreed that they were truly delicious.

What a sad, twisted face it has! Clearly it has evolved from a fish that swam upright, with eyes on either side of its head and a mouth in a more symmetrical position. Recent fossil discoveries have provided further evidence of this process of evolution, which was noted by Charles Darwin in the "Origin of Species". No Great Designer planned the Common Dab.

Fish #201 Lemon Sole *Microstomus kitt* Jill Fincham

Mono print using food colouring on fresh fish

Fish #201 Lemon Sole Microstomus kitt Jill Fincham Wet and needle felted

Microstomus kitt - Lemon Sole

LEMON SOLE

A member of the PleuronectIdae family.
Reddish brown in Colour
and coveRed in a
smooth, shiny, mOttled skin
with an underSide of white.
Lives on stony bottoms, eaTing mainly small invertebrates
down to depths of abOut 200 metres (660ft).
Its naMe is a misnomer
for it is neither a trUe sole
nor has a taSte of lemon.

They can reach 3 Kilograms (6.6lbs) in weight
and 65 centImetres (26 inches) in length.
Has an oval body, small mouTh and head. They are found
in shallow seas around NorThern Europe.

Technical Terms

Actinopterygii (ray-finned fish)
Pleuronectiformes (flat fishes)
Pleuronectidae (right eyed flounders)
Polychaetes (small invertebrates, bristle worms)

Written by Jill Fincham

References
www.britishseafishing.co.uk
www.macduff-aquarium.org.uk
https://en.wikipedia.org/wiki/English_sole

Fish #199 Atlantic Halibut *Hippoglossus hippoglossus* Elaine Franks

Mixed media, Watercolour, ink & pencil on 160gm Schoelleshammer paper 23 x 32 cm

The largest of all the bottom dwelling flatfish in the world, fully grown, mature halibut can reach up to 15 foot (4.5m) in length and 320kg in weight and mainly stay in deep water at anywhere between 300 to 2000 meters depth. Having been spawned in the hollows between banks at around 300-700m depth, the juveniles are found in shallower waters off of the coast of Norway and occasionally Greenland, Iceland, Scotland and the Faeroe Islands. As a bottom dweller, this potentially huge fish lies motionless and camouflaged on the sea bed, ready to ambush any crustaceans or fish that come its way.

Excessive commercial fishing has vastly reduced the numbers of Atlantic Halibut to the point where the wild population of this slow growing, late maturing species is now endangered in the open sea, and Greenpeace has added it to its red list of 'fish that are commonly sold in supermarkets around the world, and which have a very high risk of being sourced from unsustainable fisheries'. On a more positive note, it is hopeful that the demand for it as a food source can perhaps now be met by farmed stocks and at least five countries, Britain, Norway, Canada, Iceland and Chile are experimenting with captive production of Atlantic Halibut.

I chose to paint this fish because of its bizarre and fascinating development, this is a creature that turns from an ordinary looking and unremarkable hatchling into a perfectly adapted and completely extraordinary beast: hatched with one eye on either side of their head, just like any normal fish, during the course of its juvenile development, one eye completely migrates over the top of the head to the other side, transforming the fish's skull as it does so. As this is happening, the young fish changes from an upright swimming standard larva, to an extraordinary flattened plate of muscle perfectly adapted to its life at the bottom of the sea, where it can live for anything up to fifty years.

Fish #202 European Flounder, *Platichthys flesus,* Laura Callaghan Grooms

Mixed media on scrap wood 19 x 13 cm

The flounder is a flatfish and normally grows to around 30cm in length. It is often mottled brown, reddish spotted or blotched. It is mainly nocturnal and burrowing.

The artwork was created by collecting a range of mixed ephemera, including washed up plastics, 'ghost gear' and rubbish from the artists local beach. Laura Callaghan Grooms is a mixed-media artist based in Brighton in the south of England. Cross-artforms and mixtures of media have been at the heart of her artistic output, and are particularly inspired by the natural world. Her artwork is inspired by the places she's been and the things she's seen and felt. Using a selection of collaged paper-based ephemera as the basis, she builds up mixed media, found objects and different varieties of paint, to create finished canvasses with delicate translucent layers. She takes inspiration from the natural world for her artworks and reflects her passion for recycling and reviving found objects, particularly those that would be otherwise overlooked. A particular focus of her current work is reuse of 'ghost gear' washed up on her local beach (any fishing equipment or fishing-related litter that has been abandoned, lost or otherwise discarded) which often entangles sea creatures with devastating effects. Her 'UNTANGLED' work was endorsed by Sir David Attenborough in 2016 as part of a World Cetacean Alliance programme. "Art has a powerful role to play in highlighting human responsibility for our natural world, and the imperative to protect and safeguard for the future".

Fish #202 European Flounder, *Platichthys flesus*, Lizzie Palmer (aged 11)

Watercolour

Fish #203 European Plaice *Pleuronectes platessa* Michael O'Hara Oil on linen 50 x 60 cm

the public to choose it as an alternative to the more familiar names we see in fish shops. One supermarket chain featured the Megrim in its 'Switch the fish' campaign. In the West of England, it is referred to as the 'Cornish Sole' to boost its popularity. It is found in healthy numbers so it can be harvested sustainably. You can grill, fry, bake or poach the Megrim, and a recommended recipe serves it pan fried in lemon and butter, or in a tomato sauce. Delicious!

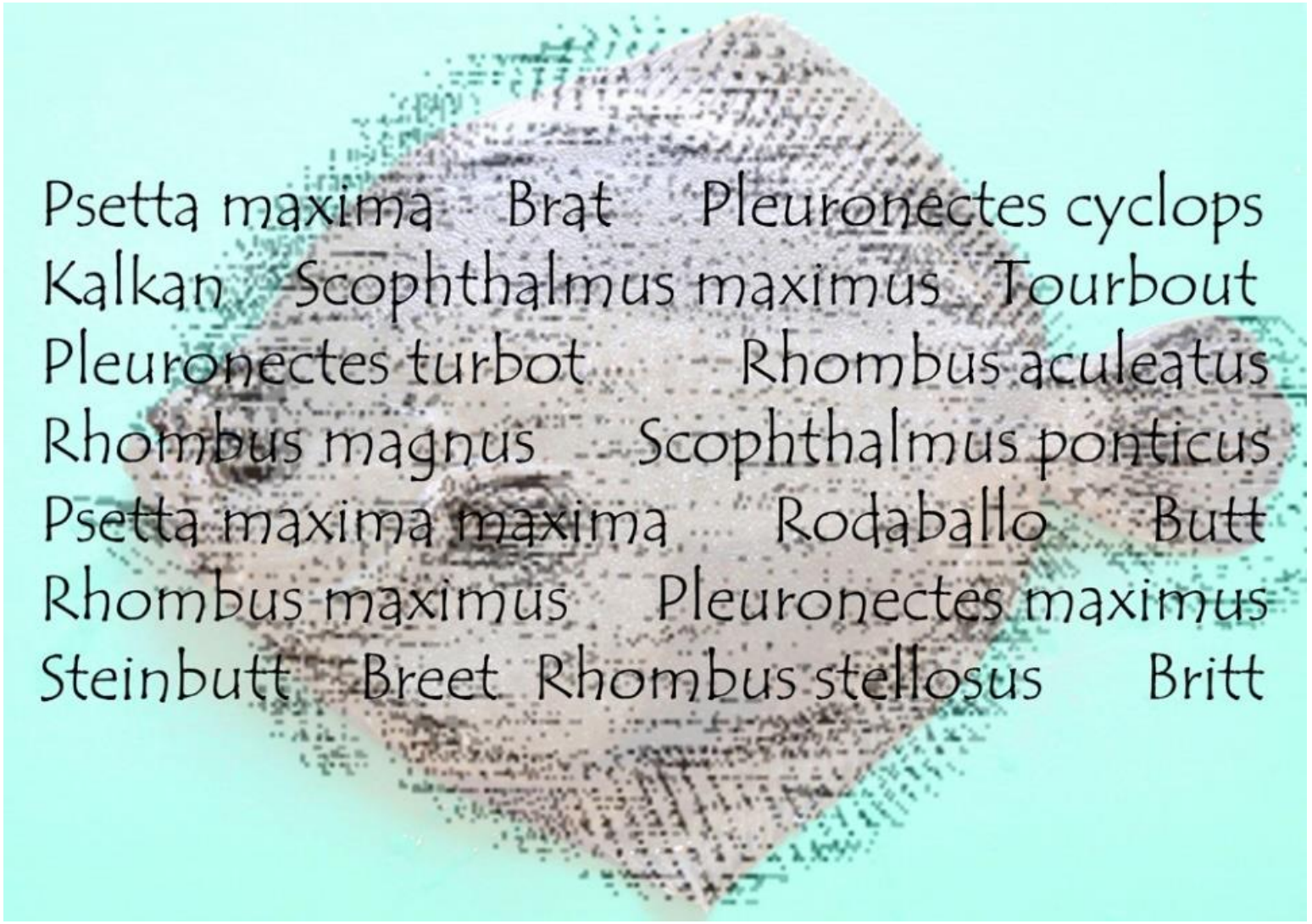
Fish #204 Megrim *Lepidorhombus whiffiagonis*
Edward Adlington
Photo etching 34 x 59 cm

Fish #204 Megrim, *Lepidorhombus whiffiagonis*, Gill Baker
Acrylic 28 x 35 cm
Interestingly, the dictionary has several definitions for Megrim:
It is an archaic word for depression, low spirits.
It can mean a whim or fancy.
It also is a variant of 'migraine'.
As a fish, it is a left eyed flatfish, sometimes called a whiff. It is found in the Atlantic and Mediterranean, usually between 100 to 700m below sea level. The Megrim rarely is found in water shallower than 50m. It is abundant off the Cornish coast. It spawns in deep water off Iceland and the west of Ireland. It can grow to 60cm (24") long, up to 4lbs in weight. It has a larger head and narrower body than most flatfish. It is light brown with dark spots and prefers a sandy or muddy sea floor, avoiding weeds. It preys on small fish, squid and crustaceans. In turn, the Megrim is eaten by sharks, seal and large cod.

The Marine Conservation Society is promoting the Megrim in the 2018 Good Fish Guide. Along with others such as dab, pollack, hake and herring, this plentiful fish should be eaten to boost the UK fishing industry. It is related to the Lemon and Dover sole, and although not as delicate or refined in texture, holds a pleasant flavour. Currently, most Megrim caught in UK waters are sold to Spain and France. In this country, there have been efforts to encourage

Fish #205 Norwegian Topknot *Phrynorhombus norvegicus*
Diana Dykes

Fish #206 Turbot *Scophthalmus maximus* Helen Grove-White Digital drawing



The Emperor's Fish: Juvenal

Cum iam semianimum laceraret Flauius orbem ultimus incidit Hadriaci spatium admirabile rhombi impleuitque sinus.

Back when the last Flavian was ripping up a half-dead world the marvellous expanse of an Adriatic turbot appeared, and filled the nets.

A wondrous fish found in the North Sea, Adriatic, Mediterranean and Black sea and going under a number of different names. As bottom feeders, turbot are camouflaged so as to be almost invisible on the sea bed and they live off sand-eels, gobies, crustaceans and bivalves as well as small fish. They have no scales but bony plates with small spines. They reach full size after 10-16 years, up to 1m length and 25kg weight. They may live to 25 years.

Turbot are excellent fish to cook and eat but their relatively low ratio of available food to body weight has made them less economic than other farmed fish. The price of filleted turbot can seem prohibitively expensive owing to the large proportion of bone discarded.

Turbot belong to the family of *Bothiedae*, which includes both Brill and Atlantic and Black Turbot. It also belongs to the family *Paralichthyidae* which, having both eyes on the left side, lies on its right side on the sea bed. This contrasts with Plaice, Soles and Flounders who lie on their left side and have eyes on the right. Since our standard picture book view of them is from the top we may observe that Turbot appear to swim to our left and Plaice swim to our right. *Paralichthyidae* are initially symmetrical at hatching, after a couple of weeks, the right eye moves to the left side to take up its new position. This gives rise to current debates challenging Darwinian theories of evolution.

Fish #206 Turbot *Scophthalmus maximus* Katie Blair

Etching and chine colle print

My 'Turbot II' print is made using etching, aquatint and chine colle techniques. First a zinc etching plate is created by drawing into the wax covered plate and then putting in acid to 'bite' the drawn line. After that tones are added in several stages by applying a resin powder and then blocking out the palest areas and putting briefly into the acid. The image is built up in this way. This results in a plate that can then be inked up and used to make a print. If printed using black ink, the image is black and white with tonal areas of different greys. Chine colle is applied during the printing process by using other papers to provide colour and/or texture, which are adhered to the main paper by layering them on the inked plate and allowing the pressure of the press to apply them to the main paper. In my print, I have used coloured tissue paper and text fragments from a 1950s journal article about North Sea fishing. This means that each print is unique.

Why did I do my 'Turbot II' print? When I was a girl, I spent a lot of my time with my Dad. Sometimes we would go sea fishing and sometimes we went for long walks, usually in the wilder areas of the Lincolnshire coast, to look at birds. Places I remember walking are the marshes at Tetney, Donna Nook and Anthony's Bank at Cleethorpes. We had an Observer's book of sea fish and I always liked the strange looking fish, especially the flatfish. I would love to watch them burying themselves in the muddy sand at the waters edge. I wanted to create an image that reminded me of those memories.

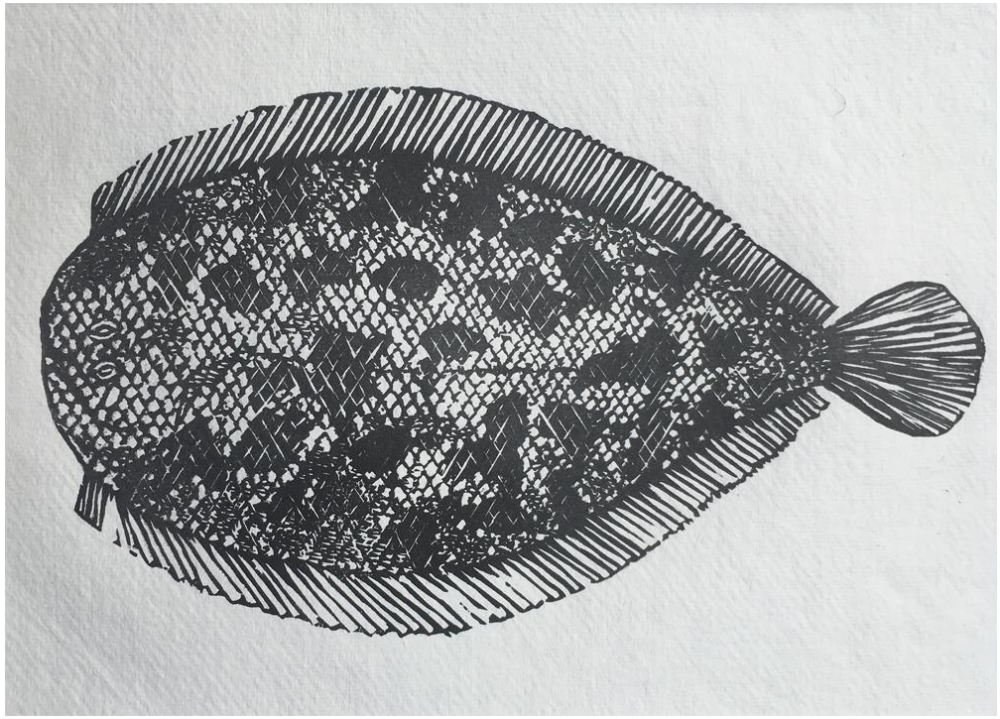
Fish #208 Topknot *Zeugopterus punctatus* Sally Bonham Watercolour and ink 30 x 42 cm

Zeugopterus punctatus.
Zeugopterus: Greek, zygon = yoke + Greek, pteron = wing, fin.
Zeugopterus punctatus is a small left-sided flatfish that is almost completely round in shape, with a broad body relative to its length. It is a mottled brown and white colour, light wide fins all the way round its body and a very small tail. It is found in the eastern Atlantic Ocean including the North Sea, Baltic Sea, English Channel, Bay of Biscay, south to the coast of Portugal. *Zeugopterus punctatus* grows to a maximum length of about 25cm. The eyed side is covered in small ctenoid scales while the blind side has cycloid scales. The many small ctenoid scales feel downy to the touch.

This species lives along coastlines in the algae zone. It is unusual among European flatfish in that it prefers a rocky substrate, rather than the sandy ground that most flat fish prefer. It has the ability to remain immobile in the most surprising sites, holding on to vertical rocks or even upside down under overhangs, sometimes in extremely shallow water. This is achieved by using its broad fringing fins to fit itself into the substrate. Unlike most other flatfish, the *Zeugopterus punctatus* does not seem to change colour for camouflage but relies on immobility to avoid detection.

The Topknot is carnivorous, feeding on small fish, marine worms, shellfish and crustaceans in the algal zone. It is preyed on by other larger fish and seals and sea lions. It is named the common Topknot due to it being widespread and to differentiate between the other two, much rarer species of Topknot found in UK waters, the Norwegian Topknot and Bloch's Topknot.

I chose this particular fish due to its intriguing name 'The Topknot' and really wanted to know more... I wondered 'Topknot?'... 'Does this fish have a tiny traditional Japanese haircut?... or an aquatic knot of hair, similar to the married men of the Joseon Dynasty in Korea?'... 'Who knows!' was Google's answer...
However, seriously, having researched the fish I've found it to be a real wonder of nature's design and I immediately began to admire its tenacity, the way it can cling to its rocky substrate home with almost super strength but also the way it's often overlooked due to its ninja like camouflage abilities. The Topknot can literally stick upside down for extended periods of time, and I mean hours! Hiding and waiting. I admire patience. And the fact it is understated, downplayed, muted... just doing its thing. Getting on with it. In my opinion, *Zeugopterus punctatus* is an awesome example of nature's perfection, a fascinating fish indeed, a stealthy, spiny, flat marvel'



Fish #209 Solenette *Buglossidium luteum* Sally Gill Linoprint

Fish #210 Thickback Sole
Microchirus variegatus
Sheila Wetton
Watercolour and Brusho crystal colour 24 x 32 cm

Thickback sole (*Michrochirus variegatus*)

A little flatfish known as Thickback Sole
Swims the ocean floor from the north to Senegal
He avoids attention from great trawling ships
That sweep the sandy beds for tasty bits.
His life, though uneventful in the main,
Has unbeknown to him, brought fame
With splash of paint on watercolour brush
We now know *Michrochirus variegatus*.

The Thickback Sole lives from the North East Atlantic, through the British Isles and south to Senegal and the Mediterranean. It lives in a depth range from 20 to 400 meters and feeds on a wide range of small bottom-living organisms like crustaceans, shrimps, worms and molluscs. The average length of this fish is 14cm - 16cm, it has an oval body shape with a base colour of brownish grey to brownish red with broad dark crossbands ending with visible dark blotches on dorsal and anal fins.
I chose this fish because of its striking appearance and funny little face.

Fish #211 Common Sole *Solea solea*
Marcelle Seabourne, Collaged monoprint
35 cm x 28 cm

"It should be one's sole endeavour to see everything afresh and create it anew." Gustav Mahler

Solea Solea - the Common Sole, also known as Dover Sole or Black Sole is a right-eyed oval-shaped flatfish with a small tail and long, thin fins. The upper side is mottled greyish or brown and the underside is white. Adults grow up to 60cm (3 feet) and weigh up to 3 kilogrammes (7 pounds). UK shore caught sole typically weigh between 500 grams and 1 kilogramme, though the UK shore caught record is 3 kilogrammes (6 pounds 8 ounces).

Just like other flatfish, the common sole looks very like a normal round fish when it hatches, with one eye on each side of the body. By the time it reaches about 1 centimetre in length, the right eye will have migrated to the other side of its head as it transforms into a flatfish. This gives the sole the possibility of lurking half-buried on the sea floor, waiting out of sight for passing prey.

With their meaty, mild flesh, sole are highly prized for their culinary versatility and are therefore of great value for the fishing industry. According to britishseafishing.co.uk, they are relatively easy for commercial trawlers to catch, as they tend to huddle together in deep water. The ICES (International Council of the Exploration of the Sea) states that sole are being fished outside of safe biological limits, which is why these fish are on Greenpeace's red list. This means they are one of the species sold in supermarkets around the world that are highly likely to have been fished from unsustainable sources. In the Irish Sea and English Channel stocks have been massively depleted. A slow recovery appears to be taking place, but the advice is still not to eat sole taken from these areas, so stocks can continue to increase. Sole caught by beam trawling, or even worse pulse trawling, which uses electricity to flush flatfish or shrimp out of the sediments in which they hide, should also be avoided, as these methods wreak havoc on the marine environment. Releasing any sole caught during April, May and June will also help replenish stocks, as this is their breeding season.

I made this picture by creating a monoprint background, onto which I stuck fish shapes printed on Chinese rice paper.

Fish #212 Ocean Sunfish *Mola mola* Steve Cobbin Acrylic on canvas 41 x 60 cm

The Ocean Sunfish or Common Mola is the heaviest known bony (that is not cartilaginous, as in sharks and rays) fish. They weigh in typically at 250kg (30stone) but can be as heavy as 1000kg (150 stone). They can be up to 3.3m long. They are found throughout tropical and temperate seas around the earth.

The Ocean Sunfish is basically a fish head with a tail. Its body is flattened, but not like a flatfish or a ray, laterally making them as tall as they are long. They eat mainly jellyfish, which are more or less blobs of mobile soup and lacking much nutrition so they have to eat masses of them. Female Molas are the greatest mothers of the vertebrates; they lay up to 300,000,000 eggs at a time. The eggs hatch into fry which look like tiny pufferfish with large fins, a tail and body spines, very different to the adults.

Not only are Sunfish the most prolific parents, the offspring hold the growth record of all vertebrates. By adulthood they may have increase more than 60,000,000 times their birth size They have few natural predators. Sea lions, killer whales and sharks will eat them as do humans; they are a delicacy in Japan, Korea and Taiwan. Sunfish and sunfish products are banned in the EU though they are frequently caught in gillnets. They are related to pufferfish, porcupinefish and filefish. They can be found near the surface of the sea, their fins sometimes being mistaken for those of sharks though they move very differently and adults spend a lot of time below 200m.

Fish #212 Ocean Sunfish *Mola mola* David Carruthers
Digital drawing

Sunfish
Class - Osteichthyses
Order - Tetraodoniforms
Family - Molidae
Genus - MOLA MOLA

The Sunfish is a strange truncated fish which seems to be all head, tail and no body. The name *Mola* comes from the Latin for millstone. In Taiwan they are called the Toppled Car fish, in Germany The Swimming Head and in France, the Moon fish. Sunfish are currently the heaviest boned fish in the world, in 1995, a 3.1m specimen was weighed in at 2,235kg. Related to the Puffer fish, *Mola Mola* are capable of colour changes particularly when stressed or under attack from a Sea-lion or other predator and can turn from light to dark within a matter of moments.

In my depiction of this extraordinary fish I included a photograph of a *Mola Mola* skeleton taken by Charles Dodgson, aka. Lewis Carroll, in 1857, a man who was no stranger to the surreal beauty of the world.

Fish #213 Slender Sunfish *Ranzania laevis* Jo O'Hara

Pencil and pencil crayon on paper 42 x 29 cm

The Slender Sunfish *Ranzania Laevis* is found all over the world in tropical and temperate seas. It can grow up to 1 metre. The Sunfish has a slender oblong body, a pointed snout with an oval funnel-like mouth (that is always open), long pectoral fins, and smooth skin covered in tiny hexagonal scutes. From above Slender Sunfish are dark blue. They are bright and silvery on the sides and below, with variable blue, grey, brown or green stripes and spots, and a series of dark stripes curving below and behind the eye.

Large shoals occasionally strand themselves along Australia's south-west coast. They are considered poor swimmers because their fins are small and look unfit for purpose, however, they are agile and fast. Viewed from the side, underwater the Sunfish can be mistaken for a shark. This optical illusion is believed to be a way of warding off predators.

In my piece of work the Slender Sunfish is seen in collaboration with the Sun King (Louis XIV). This fish is elaborate, likened to the fashion and drapes during the reign of the Sun King. Its eyes can be likened to jewels. Like Louis the Fish can be perceived as more powerful than it is by its unique way of tricking the eyes of its predators. The use of blue not only relates to the ocean but to the way Louis XIV used colour to dazzle and overwhelm.

I have adapted the title of Pink Floyd's song hoping that the Sun Fish will continue to reign in our waters and shine on forever. Please say the words and waft them to the sea.

Shineonyoucrazysunfishineonyo
ucrazysunfishineonyoucrazysun
fishineonyoucrazysunfishine

Fish #214 Alfonsino *Beryx decadactylus* Jodi Warrick
Acrylic on papier maché 15 x 28 x 5 cm

Fish #216 John Dory *Zeus faber* Biff Vernon

Oil on board 76 x 76 cm

John Dory is a curious fish, a flatfish in an upright direction, carrying great flowing spines from its fins, making it look much larger than its weight would suggest, and, of course, awkward to swallow. The dark spot on its flank might be mistaken, by a potential predator, for a large eye, another defence against becoming a dolphin's lunch. They grow to a maximum length of about 70 cm, sometimes weighing 8 kg.

John Dory are demersal and benthic, found at depths down to several hundred metres. They have a widespread occurrence in coastal waters from Scandinavia to the South Africa, Asia and Australia. It is rare in the North Sea, mostly living in warmer waters. Genome analysis reveals significant difference between specimens from European waters and Australasia and these northern and southern clades might best be regarded as separate species. We shouldn't blame Linnaeus for lumping them all together. Genome technology wasn't up to much in 1758 when he described this fish.

They are generally solitary fish, although smaller John Dory have been found to form small shoals. John Dory predate smaller fish. Although slow swimmers their tube-like mouth is extendable so when near their prey they shoot their mouth out and suck in the smaller fish.

They have a pair of sonic muscles on the swim-bladder wall that produce sounds by rapid contractions of the muscles. Two types of the sounds are emitted, a 'bark' and a 'growl'.

They are not an important commercial fish, but when caught fetch a high price. They are said to taste remarkably good. Since the head makes up almost half of the fish the filleted flesh may be disappointing in quantity but that head, boiled up, makes excellent stock.

What of the origin of the name? 'Dory' might come from the French dorée, gilded, or perhaps the John Dory, hero of an old ballad. Or another French connection, John derives from the French jaune, yellow. Jules Verne tells us, in Antarctic Mystery, "The legendary etymology of this piscatorial designation is Janitore, the door-keeper", referring to St. Peter, who brought this fish to Jesus. Another tale has it that St. Peter dropped a coin overboard and the fish caught it in its large mouth and brought it back up to the surface. The dark spot on the fish's flank is St. Peter's thumbprint. In the Mediterranean region the fish is known as St. Pierre or Peter's Fish. In Germany it is called 'Heringskönig', Herring King, since it slowly and majestically follows the herring shoals, in pursuit of prey.

Epilogue

The Time and Tide Bells, Marcus Vergette's series of large bronze bells, installed around Britain's coast and rung by the waves at high tide, seek to spark conversations about our relationship with the seas. In Lincolnshire the community arts group that took on the task of putting a Time and Tide Bell on their beach, has launched a series of related arts projects that do just that. In May 2018 we held our much acclaimed exhibition. 'Across the Seas' at the Sam Scorer Gallery in Lincoln, using art to tell stories about human migration, in the past, now and in the future. The #200Fish project is the second major exhibition, opening our eyes to the mystery, awe, wonder and beauty of life under the waves. And to its fragility and vulnerability.

For most of us knowledge of the biology of the North Sea is woefully lacking, yet many hold strong opinions about how the waters should be managed. Politicians have exploited the ignorance, giving the long-term welfare of sea-life a low priority. Fish care nothing for national borders, sometimes breeding in one nation's territorial waters, growing up in another's and reaching maturity in a third. And we have the hubris to think we own them.

The summer of 2018 has seen heatwaves stretching over much of the Northern Hemisphere and record high temperatures in the North Sea. Some talk of this being the new normal but we have seen only about 1°C of global temperature rise so far. We are on a trajectory that leads to 4°C or more within the lifetimes of our younger children, and worse beyond that in a regime in which climate models become unreliable but where uncertainty leans mostly to the bad side.

Many fish species are highly mobile and some will out-run climate change, but they will not escape ocean acidification. About half of all the carbon dioxide that humanity emits into the atmosphere from its burning of fossil fuels is absorbed by the oceans, reducing the pH of the waters. This acidification may become the greatest ultimate challenge to the biodiversity of our seas. An increase in acidity adversely affects any creature that secretes calcium carbonate to build bones and shells. Perhaps the lasting legacy of the Anthropocene will be the dominance of the jellyfish.

It's a bleak prospect, yet this #200Fish project has demonstrated the resourcefulness of people. The imagination, creativity and skill of the over two hundred artists who have contributed to this project gives us hope for the future. The support and enthusiasm we have seen from so many more shows that people do care. Now we must act, making the deep changes in our lives that are required to ensure our art and culture can survive.

Some children have contributed, and theirs are the most important voices as they will have to deal with the consequences of our behaviour into the 22nd century. Since the first stories were told, mythologies of the seas have been created so we'll give the last word to our youngest artist who painted a creature that may, or may not, exist. Lola has called it 'The Sea's Secret'.

Biff Vernon, curator and editor.

‘The Sea’s Secret’ Lola Spero

Acrylic on canvas 36 x 26 cm