**Anotrichium furcellatum**

**Description:**
It forms dense hemispherical cushions about 7 cm high, attached loosely; it is rose-pink in colour. It has erect axes comprising numerous much-branched filaments, fanning out upwards. It is particularly flaccid and delicate.

**Habitat and Ecology:**
Shallow fully marine bay.

**Distribution:**
Milford Haven.

**Originally from:**
Unknown.

**Vector:**
Unknown.

**Invasive?**
Spread from 2 records in 1996/7, to 6 sites in 2002.

**Controls?**
Unknown.

**Gwymon coch**

**Description:**
A red alga

**Habitat and Ecology:**
Unknown.

**Distribution:**
Unknown.

**Invasive?**
Unknown.
Asparagopsis armata  Harpoon weed  Gwymon bachog

Habitat and Ecology:
Found in shallow sublittoral or in deep littoral pools.

Distribution:
Pembrokeshire and Pen Lleyn.

Originally from:
Australia.

Vector:
Spread from alien populations already established in Europe.

Invasive?
Unknown.

Controls?
None used.
**Bonnemaisonia hamifera**  
A red alga  
**Gwymon coch**

**Description:**
In Britain, gametophyte plants occur from March to June. They are brownish-red, with feathery fronds and a somewhat flattened axis up to 1 mm wide and 350 mm long. They can be attached to Cystoseira and other algae by crozier-shaped, hook-like branches. Tetrasporophyte plants occur all year round, but are most obvious from October to March. They are brownish-red, much branched and filamentous, in dense tufts to 25 mm in diameter, resembling cotton wool.

**Habitat and Ecology:**
Found on rocks and other algae at lowest intertidal and subtidal.

**Distribution:**
Gower to NW Anglesey.

**Originally from:**
Asia.

**Vector:**
Probably introduced accidentally with shellfish.

**Invasive?**
Unknown.

**Controls?**
None used.

Map: NBN.org.uk
**Solieria chordalis**  
**A red alga**  
**Gwymon coch**

### Habitat and Ecology:

This algae lives in shallow waters, up to 5 m below the low-tide level, on a range of substrates such as mud, gravels, shells and even calcareous algae such as maerl. It settles mostly in sheltered and sometimes turbid areas.

### Distribution:

Milford Haven.

### Originally from:

Unknown.

### Vector:

Introduced from alien population in France.

### Invasive?

Unknown.

### Controls?

None used.

---

**Description:**

It has a firm, cylindrical, red-pink thallus with a length of 15 to 20 cm and a diameter of 0.5 to 2 mm. This develops from a fibrous base of intertwined filaments, that act as holdfasts around the anchoring point of the seaweed. The main axes are irregularly branched. Over the growth period they are covered with small protuberances that develop into branchlets; they can detach and re-attach to the substratum to develop into a new plant.

Photo: Francis Bunker

Map: NBN.org.uk
**Antithamnionella spirographidis**  
A red alga  
Gwymon coch

**Habitat and Ecology:**
Infralittoral fully marine rocky cobbles.

**Distribution:**
West Pembrokeshire, Pen Lleyn and North West Anglesey.

**Originally from:**
Unknown.

**Vector:**
Accidentally introduced from Mediterranean where already established.

**Invasive?**
Unknown.

**Controls?**
None used.

**Description:**
Forms carpets or fringes between 0.8 and 3.5 cm high, spreading extensively over the substratum. Bright red in colour, very delicate and flaccid.
**Antithamnionella ternifolia**

**Description:**
Forms carpets or fringes 2-4 cm high, spreading extensively over the substratum. Deep rose-red in colour, very delicate and flaccid.

**Habitat and Ecology:**
Infralittoral fully marine rocky cobbles. It has a rapid growth rate and grows in abundance on all types of substrata including eelgrass leaves, algae, animals, pebbles and artificial materials, over a wide range of conditions.

**Distribution:**
West Pembrokeshire and Tremadog Bay.

**Originally from:**
Unknown.

**Vector:**
Possibly introduced on ships’ hulls or ropes.

**Invasive?**
Unknown.

**Controls?**
None used.

**A red alga**

**Gwymon coch**

Photo: Francis Bunker

Map: NBN.org.uk
**Grateloupia turuturu**

**Description:**
It has thin, pink to maroon blades, often with bladelets (pinnae) at the base, and a markedly gelatinous, slippery texture. It can grow up to 3m tall. There are various growth forms (divided or undivided, varying blade shapes). It grows individually, but more typically in clumps of up to 8 individuals. It grows to its full length in late summer and early autumn, and then condenses to a crust-like form over the winter.

**Habitat and Ecology:**
It is found in shallow water down to 2m below mean low water, attached to firm surfaces. It prefers protected waters such as tidal pools; it is believed to be unable to survive very cold water.

**Distribution:**
Milford Haven.

**Originally from:**
Unknown.

**Vector:**
Perhaps introduced with shellfish.

**Invasive?**
Invasive locally.

**Controls?**
Unknown.

---

**A red alga**

**Gwymon coch**

**Description:**
It has thin, pink to maroon blades, often with bladelets (pinnae) at the base, and a markedly gelatinous, slippery texture. It can grow up to 3m tall. There are various growth forms (divided or undivided, varying blade shapes). It grows individually, but more typically in clumps of up to 8 individuals. It grows to its full length in late summer and early autumn, and then condenses to a crust-like form over the winter.

**Habitat and Ecology:**
It is found in shallow water down to 2m below mean low water, attached to firm surfaces. It prefers protected waters such as tidal pools; it is believed to be unable to survive very cold water.

**Distribution:**
Milford Haven.

**Originally from:**
Unknown.

**Vector:**
Perhaps introduced with shellfish.

**Invasive?**
Invasive locally.

**Controls?**
Unknown.
**Polysiphonia harveyi**  
A red alga  
Gwymon coch

**Habitat and Ecology:**  
Lower shore rock pools. It has a rapid growth rate and is an opportunist.

**Distribution:**  
West Pembrokeshire and Tremadog bay.

**Originally from:**  
Asia.

**Vector:**  
Introduced to Europe with oysters, probably from Japan.

**Invasive?**  
Can become very abundant, but hasn’t spread widely in Wales.

**Controls?**  
None used.

**Description:**  
It grows to between 0.5 and 10 cm high. It forms dense tufts of much-branched erect axes. Young branches are brownish-red in colour bleaching to yellow; older branches become dark brownish-red, fairly tough and flexible.

Found growing on Grateloupia turuturu.  
Photos: Francis Bunker

Map: NBN.org.uk
**Colpomenia peregrina**  

**Habitat and Ecology:**

It is found on rock, other seaweeds and shells. The species is usually epiphytic, growing on a variety of seaweeds in mid-tide rock pools and down to the sub-littoral region. It thrives in sheltered areas.

**Distribution:**

Gower, West Pembrokeshire, Pen Lleyn and NW Anglesey.

**Originally from:**

Pacific Ocean.

**Vector:**

Spread from alien population in France, where it was introduced with oysters.

**Invasive?**

Not known to be invasive.

**Controls?**

None used.

---

**Oyster thief**

**Lleidr wystrys**

**Description:**

It is a non-gelatinous green alga, greenish-olive in colour with fine brown dots. It forms a thin-walled hollow sphere, usually 1-7 cm in diameter. It can be confused with the native *Leathesia difformis* which is lobed with a gelatinous surface. *Colpomenia peregrina* is dry and papery to the touch and can be torn easily.
**Habitat and Ecology:**
Grows on hard substrata in shallow waters and can also tolerate estuarine conditions. It can out-compete local species because it is fast growing, can reproduce within the first year of life and being monoecious can fertilize itself.

**Distribution:**
Swansea Bay round to East Anglesey.

**Originally from:**
Asia.

**Vector:**
Spread from alien populations in France.

**Invasive?**
Yes. Has spread very fast in Wales over the last 11 years. It is a fast growing species that can self-fertilise and also reproduce within the first year. It competes with native seagrasses for space and light and can become a nuisance in harbours, beaches and shallow waters.

**Controls?**
Mechanical removal would probably need to be repeated indefinitely. Chemical methods using herbicide have failed due to lack of selectivity and the large doses needed. Biochemical methods have had little or no effect. Effective methods for its permanent removal have not been found.
**Codium fragile subsp. Atlanticum**  
**Sea velvet**  
**Melfed môr**

**Description:**
A spongy, dichotomously branched green alga without distinct flattening at the forks of the branches. Dark green in colour with velvety texture.

**Habitat and Ecology:**
Mainly in pools in the upper and mid-shore.

**Distribution:**
Anglesey and Pen Lleyn.

**Originally from:**
Asia.

**Vector:**
Spread from Ireland where introduced with shellfish.

**Invasive?**
Can displace native Codium, but not highly invasive.

**Controls?**
None used.
**Codium fragile subsp. fragile**

**Velvet horn**

**Corn melfed**

**Habitat and Ecology:**
Found at lower shore and shallow subtidal. Can dominate intertidal and subtidal rocky reef communities.

**Distribution:**
Pen Lleyn.

**Originally from:**
Asia.

**Vector:**
First recorded in Europe in Holland in 1900.

**Invasive?**
Can displace native Codium but not highly invasive.

**Controls?**
Unknown.

**Description:**
A large, conspicuous spongy green alga.

Photo: Francis Bunker

Photo: CCW

Map: NBN.org.uk
**Habitat and Ecology:**
It prefers rocks and other hard surfaces, but also spreads in areas with other benthic substrata. It thrives in areas that are relatively well sheltered from waves. It can also attach to other algal species and to animals. It can grow at depths of over 40 m, but is usually found between 6–22 m deep. It can tolerate varying temperatures from freezing to tropical conditions (30°C), and requires relatively high salinity.

**Distribution:**
North Anglesey and Tremadog Bay.

**Originally from:**
Asia.

**Vector:**
Probably ship-assisted, but may also be an associated unintentional introduction with Pacific oysters.

**Invasive?**
Grows rapidly and spreads over large areas, and may therefore displace other algal species in particular locations. It also attaches to other algae and to benthic animals.

**Controls?**
Unknown.

---

**Description:**
It is bushy in appearance and can grow to a height of around 30 cm. The plants are dark red in colour, and collapse when removed from the water. They have one or more main axes, branching in multiple planes. The main axes and branches are polysiphonous in structure (consisting of several rows of cells), with four periaxial cells (giving the alga a segmented appearance). Attached to the main branches are monosiphonous (one cell-row wide) branchlets, the tips of which are dichotomously branched.

Photos: Francis Bunker
**Spartina anglica**  
*Common cord grass*  
*Cordwellt*

**Description:**
It is a stout, rhizomatous salt marsh grass. The stiff plant may be 5 to 100 cm tall, with stems 5 mm or more in diameter. The leaf blades, which can be flat or inrolled, are 5 to 12 mm broad and may be persistent or falling.

**Habitat and Ecology:**
Salt marsh. Tidal mudflats of coast.

**Distribution:**
Whole coast of Wales where suitable habitat.

**Originally from:**
North America.

**Vector:**
Introduced in ships' ballast water.

**Invasive?**
Invasive, but in recent years has become less vigorous.

**Controls?**
There have been several attempts to control Spartina anglica where it has invaded nature reserves by spraying it with the herbicides Dalapon and Feneron, and attempts have also been made to dig up seedlings. Dalapon is reported to have been up to 80% successful, but is generally considered to be not very effective.
**Grateloupia subpectinata**

*Description:*

It is also referred to as *Grateloupia filicina* var. *luxurians*. This seaweed has fronds that can reach a length of up to 70 cm in comparison to the native species *Grateloupia filicina* which only reach 10 cm. The fronds are compressed, tufted and dark purplish-brown in colour. The main axis is 1-4 mm broad. The axes and branchlets taper at the base and tip.

*A red alga*

*Habitat and Ecology:*

It grows in Marinas.

*Distribution:*

Not yet reached Wales.

*Originally from:*

Asia.

*Vector:*

Arrived with oysters as an unintentional associated introduction.

*Invasive?*

Unknown. Could possibly displace native species due to its size, but no evidence for this as yet.

*Controls?*

None used.