

Marine marvels

As Gordon scoops up a generous handful of emerald-green samphire (sea asparagus), he tells me it has been popular with the locals for years. Another customer chips in; she eats sea vegetables once a month. "It's expensive, but you don't need much, it's so full of minerals."

Gordon's samphire cooks up nicely after just three minutes of steaming, and the mild sea taste seems convincingly nutritious. And they're right about the popularity of sea greens, which goes back centuries. Used by the Chinese earlier than 300BC, they feature in the diets of many coastal cultures, including our own. Still widely used in Japan for soup stocks, salads, and cooking beans, they're also found – in extract form – in such everyday Western foods as ice cream and salad dressing.

Ancient Oriental medicine has long valued sea greens for their contribution

to general wellbeing and particularly to the endocrine and nervous systems. Modern interest in their health benefits began in 1927 with the discovery that Japanese people living where there were large amounts of sea vegetables enjoyed particularly long lives. Since then, research has uncovered amazing health benefits: they're thought to have an antibiotic and anti-tumour effect; aid weight loss; protect against radiation; and even help fight the HIV virus that causes AIDS.

This is all good news for those battling prejudice about sea greens. "Interest in sea vegetables in the UK has skyrocketed in the last few years," says Christopher Dawson, chairman of Clearspring, which imports sea vegetables from Japan, the US and France. He puts this down to the fashion for all things Japanese – particularly sushi – and consumers turning to the high calcium content of certain varieties to replace milk (1/4 cup of cooked hijiki provides more than half the calcium of a cup of milk).

You may not share Dawson's enthusiasm for as many as four varieties in a meal, but even a little in your diet will do wonders: "You can't get a better mineral content than from sea veg," he declares.

It seems that nutrient concentration in sea water – sea vegetables' habitat – closely matches that of our blood, and provides essential elements including calcium, sodium, magnesium, potassium, iron and zinc, all in a highly bio-available form.

With their high iodine content, sea greens combat goitre and hypothyroidism (although excessive amounts can also cause goitre, and sea greens are not recommended for people with over-active thyroids). And if sea greens are thoroughly rinsed to remove salt

crystals, there's no need to worry about sodium content.

These protein-rich vegetables also boast vitamins A (as beta carotene), B1, B2, B6, C, niacin, pantothenic acid and folic acid, and with trace amounts of B12 – rarely found in land vegetables – they're particularly welcome for vegetarians or vegans.

Virtually fat-free and low in calories, you can eat generous helpings without worrying about weight. In fact, sea greens are promoted as weight loss aids. They also offer plenty of fibre, cleansing the intestines, and traditional cultures value sea greens for the nourishment they provide for the hair and skin.

Particularly exciting is their detoxifying ability. They're full of alginic acid, which binds with heavy metal pollutants in our intestines – such as lead and mercury – preventing them from being absorbed. There's also evidence that sea greens neutralise radiation. Strontium, which can cause bone tumours or leukaemia, is bound by alginate to pass unabsorbed from the body.

But if sea greens are so effective at binding toxic heavy metals – so much so that scientists use them to measure contamination levels in sea water – could we be harming ourselves by eating them? Not if they come from relatively unpolluted waters. Commercial harvesters source their vegetables from the cleanest waters of the Atlantic and Pacific oceans. Many thoroughly test for contamination and some boast the 'gold standard' of purity – organic status.

Heavy metal levels in these sea greens will be so small that the body can easily deal with them. The organic (non-toxic) form of arsenic found in sea greens, for example, is flushed from the body without being absorbed.

As for concerns about 'hot' radiation-

Roaring Water Bay

Five years ago, the parish council in the tiny village of Skibbereen on Ireland's south coast decided to do something useful with the abundance of seaweed and sea vegetables in nearby Roaring Water Bay.

What the village needed was employment prospects, so three and a half years ago, 208 villagers became shareholders in Roaring Water Bay Seaweed Co-op. Now, the co-op employs 12 people and profits are ploughed back into the community.

Most of the co-op's products are exported – the Body Shop is a major client – and Roaring Water Bay may soon be supplying sea vegetables to a major supermarket.

The co-op's sea greens grow in some of the cleanest waters in Europe, says manager Diana Pitcher, waters that have spawned a £6m Irish seaweed industry. It's an industry with its roots in the past: "There's a great history in Ireland because a farm that went down to the shore was worth more, because you could gather seaweed to use on the land as a fertiliser."



Pesce Spada Alla Griglia
(Lemon Grilled Swordfish)

contaminated sea greens, recent research shows that even if you ate a heavy seafood diet from the radiation-contaminated Irish Sea, you'd still get more radiation from your natural environment.

For the best range of quality sea greens, try health or organic stores. Certain Waitrose and Tesco stores stock dried nori, and some Sainsbury's stores offer fresh samphire twice a year. Don't be fooled by 'Chinese seaweed', which is in fact cabbage.

For fresh sea greens, unless you're willing to don Wellingtons yourself – in which case you'll need to target clean waters and use sustainable harvesting techniques – try a fishmonger, or local supplier if you live near the coast. But fresh is unnecessary when many sea greens come dried and will last indefinitely; simply soak to reconstitute.

If cooking with whole sea vegetables seems ambitious, you're not alone. "Many people want to add seaweed to their diet but find it inaccessible," says Seagreens' Simon Ranger. "Even if they can find seaweed, they're uncertain how to use it."

Hence Seagreens' low-sodium table condiment, and seaweed granules for cooking, baking and sprinkling on food. Other minimum-fuss products include Get Real Organic Foods' Sutaki Pies – oriental beans, seaweed and stir-fried vegetables in wholemeal pastry – and new tastes from France, where interest in the health properties of sea greens is high. These include Eco-Zone's pre-

cooked sea 'beans', seaweed tartare, and par-cooked organic bread with seaweed.

The following recipes use both 'convenience' products and whole sea vegetables. Specialist cookbooks can provide further ideas, and some suppliers include recipes on their packets and will send more at your request.

MUSSEL, DILLISK & RICE BROTH

This simple recipe comes from Gerry Galvin, chef at the plush Drimcong House hotel in Galway.

Serves 4

- 48 large, plump mussels
- 600ml (1 pint) fish stock
- 175g/6oz cooked, plain risotto
- 25g/1oz of dried dillisk/dulse
- 1 tbsp finely chopped sweet cicely or dill
- 1 tbsp finely grated Parmesan
- 1 glass wine

1. Wash and shred the dillisk/dulse and scrub the mussels, removing the beards.
2. Heat a glass each of water and white wine until boiling and add the mussels, cooking over a high heat until the shells open.
3. Cool and remove the shellfish.

TO MAKE THE SOUP:

1. Heat the stock, strain in the mussel-cooking liquor, then add the risotto and dillisk. When it is at boiling point, add the mussels and cook for 30 seconds.
2. Stir in the chopped herbs and sea-

son as necessary.

3. Spoon into warmed soup bowls and top with a little cheese.

Nutrition Information

Per portion:	Calories	158g	
Protein	13g	Fat	3g
Carbohydrate	18g	Fibre	1g
Key vitamins and minerals – B2, B3, B12, folic acid, potassium, iron, zinc, selenium, iodine			

PESCE SPADA ALLA GRIGLIA (LEMON GRILLED SWORDFISH)

Seagreens' exotic adaptation of a traditional Italian dish is quick and easy to prepare.

Serves 4

- 4 swordfish (or halibut) steaks
- 6 tbsp virgin olive oil
- 2 large lemons
- 2 tbsp Seagreens® Culinary Ingredient
- 35g (1½oz) fresh mixed herbs (dill, chervil, tarragon)
- Freshly milled pepper to taste
- 50g (2oz) mixed dried sea vegetables
- 50g (2oz) Atlantic Dulse dried sea vegetable
- 1.5kg (3½lb) potatoes
- Seagreens® Table Condiment, to taste

1. Remove skin from the fish steaks. Halve the lemons and juice 3 halves. Then chop the herbs finely and add to the juice, keeping a little dill or tarragon for decoration.
2. Mix the oil, lemon juice, Seagreens® Culinary Ingredient and ground pepper in a large dish.
3. Place steaks into the mixture and leave for 1 hour, turning from time to time.
4. Prepare 4-5 thin slices of lemon to dress the fish when served. →

5. Prepare potatoes as preferred.
6. Mix and place the sea vegetables and seaweed into a sieve inside a bowl, cover with cold water and leave for about 8 minutes to re-hydrate, then drain off water. Boil kettle.
7. Remove steaks from dish and grill for 4 minutes either side. While they grill, hold the sea vegetables in the sieve over a sink and pour boiling water all over them to warm them.
8. Serve the steaks, potatoes and sea vegetables, adding back some of the oily herbs over the fish, and decorate with a small sprig of dill or tarragon and the twisted lemon slices.
9. Grind Seagreens® Table Condiment from your mill over the sea vegetables (don't use salt).

Nutrition Information		
Per portion:	Calories	631g
Protein	42g	Fat 24g
Carbohydrate	65g	Fibre 62g
Key vitamins and minerals – A, B group, C, E, calcium, magnesium, potassium, iron, zinc, selenium, iodine		

WAKAME CUCUMBER SALAD

This easy-to-make Japanese dish from Clearspring is very refreshing and goes particularly well with sushi.

Serves 4

- 1 cucumber, sliced very thin
- ½ tsp sea salt
- 1 cup Clearspring wakame (soaked in tepid water for about 10 mins)
- 2 tbsp rice vinegar
- 2 tsp mirin
- 2 tsp shoyu
- 1 tsp water

1. Slice cucumber, sprinkle with salt, toss, gently squeeze for one minute, and set aside.
2. Soak wakame, drop into boiling water, then remove and immediately plunge into cold water to brighten and set the colour.
3. Remove any tough ribs and chop wakame into 1-inch pieces. Wrap it in a clean towel to remove excess moisture.
4. Gently squeeze excess water from cucumbers and place them in a bowl with the wakame. Combine remaining ingredients, add to vegetables, and toss.
5. Serve on a bed of lettuce and garnish with paper-thin slices of red radish.

Nutrition Information		
Per portion:	Calories	33g
Protein	4g	Fat 1g
Carbohydrate	2g	Fibre 13g
Key vitamins and minerals – C, calcium, magnesium, potassium, iron, zinc, iodine		



SEAWEED WHISKEY PUDDING

Carrageen, an effective gelling agent, can be used in a variety of dishes that require gelatine, and it's favoured by chefs worldwide, says Roaring Water Seaweed's Diana Pitcher. This recipe is based on her grandmother's carrageen blancmange: "I absolutely adored it and my brother just couldn't bear it!"

Serves 4

- A small handful of dried carrageen
- ¾ litre (1½pt) milk (preferably organic)
- 1 vanilla pod
- 1 tbsp caster sugar
- 1 egg and the white of an egg
- 1 tbsp Irish whiskey
- Pinch of salt

1. Soak the carrageen in cold water for 30 minutes.
2. Strain and cook over a low heat or in a bain marie with the milk and vanilla pod for 30 minutes.
3. Strain to remove seaweed and stir in the sugar and salt.
4. Pour the warm milk mixture into a whisked egg, stirring all the time.
5. Return it to the pan until it reaches a creamy consistency to make a custard. Hand-whisk to avoid lumps or burnt milk.
6. Whisk the egg white and fold it into the custard with a metal spoon.
7. Stir in the whiskey. Chill.
8. Serve with marinated peaches or apricots.

Nutrition Information		
Per portion:	Calories	141g
Protein	9g	Fat 5g
Carbohydrate	15g	Fibre 6g
Key vitamins and minerals – B12, folic acid, calcium, potassium, iron, zinc, iodine		

Know your sea veg

With over 10,000 species of brown, red and green sea greens, it might seem like you need a whole new vocabulary. But sticking to these common varieties will give you enough freedom to experiment – and they're easy to find in the shops.

AGAR FLAKES This extract will set savoury aspics or sweet jellies.

ARAME The mild taste makes it a good choice for sea vegetable novices, and it's an excellent source of minerals, especially calcium and potassium. Soak, and add to noodles and salads, or lightly cook with vegetables, tofu, tempeh, sauerkraut or stir fries.

CARRAGEEN Also known as Irish Moss, this red seaweed yields carrageenan, used to thicken many foods including soups and jellies.

DULSE (DILLISK) Widely used for food by the maritime Irish and Scots, this reddish brown variety is best used dried – and goes well with dark ales or stout.

HIJIKI A rich source of calcium, often credited with giving the Japanese their lustrous hair. Intensely flavoured black strings add striking colour contrast when sautéed with vegetables or cooked and mixed with tofu or seeds.

KOMBU This tall broadleaf variety helps bring out the subtle flavours from other ingredients, and when cooked with beans makes them more tender and digestible. Usually soaked before use in broths and soup stocks, particularly miso soup.

NORI Dried and pressed into thin sheets – the Japanese use more than 9 billion of these a year. Toast sheets lightly and wrap around riceballs or crumble as a garnish. Rich in protein, calcium, iron and vitamins.

SAMPHIRE (SEA ASPARAGUS) Highly seasonal – you'll have to be quick. Sainsbury's February stocks from Saudi Arabia lasted 10 days, and their August intake from Norfolk a similarly short time. Not all branches stock it – call the customer help line to find out if yours does. Alternatively, your fishmonger may be able to get it in.

SEA LETTUCE This full-flavoured variety is rich in calcium, iron, magnesium and vitamins A and B; often used fresh as a salad vegetable.

WAKAME A sweet, thin-leafed variety with a mild flavour and a tender texture. Commonly used in miso soup and can be prepared in the same way as dulse.

Adrienne Clarke is a freelance writer specialising in food and health.