An Unwelcome Immigrant

In recent years Australians have developed a taste for Japanese cuisine, this is probably where they have first encountered wakame seaweed. *Wakame* is the basis of miso soup and seaweed salad. Unfortunately *wakame* now appears in places other than in Japanese restaurants.

*Wakame*'s original range was confined to the coasts of Japan, Korea and China. The kelp is generally spread through human activities, including boat movements and the transportation of contaminated water and equipment. Due to discharge of contaminated ship ballast water it has now invaded areas throughout the world.

*Undaria pinnatifida*, *wakame*'s scientific name, is a highly invasive species, grows rapidly and has the potential to overgrow and exclude native algal species. Its presence may alter the food resources of herbivores, such as luderick and abalone that would normally consume native species.

The first appearance of *Undaria* in Australia was in 1988, at Triabunna in Tasmania. It is establishing itself throughout Southern Australian waters and is now present along the Victorian coast. There has been a significant outbreak within the Apollo Bay area.

*Parks Victoria has recently discovered this marine pest attached to the hull of a vessel within the Queenscliff Harbour. Authorities are currently working with the owner to remove the seaweed from the vessel. A survey will also be undertaken within the harbour to see if this invasive pest has spread to other vessels or infrastructure.*

(Continued on page 5)

Melbourne Boat Show 2012

2012 was the 52nd annual BIA show and it didn’t disappoint, the show takes up the entire Melbourne Exhibition Centre a great feat considering the size of the space. Two stages run regular fishing demonstrations, boating & maintenance tips not to mention the 100 plus exhibitors all with expert knowledge on the brands they offer.

The standouts for me were the Chaparral 216SSI, Savwinch and Raymarine electronics.

If you are into wake/ski boats or quality cruisers then Chaparral is probably a brand you’re quite familiar with already, as the company has been producing boats now for 47 years. Whilst I’m not the skiing type it was hard not to take in the quality of the hull modellings, quality of the fittings, innovative storage solutions and overall sleekness of the different models. I spoke with the head importer Scott O’Hare at the show and was blown away to hear that they had sold three boats in the first day! A fair effort considering it was only 1pm and the show had only been opened.

According to Scott the most popular model was the 216SSI, the one on display came with a 350 Mag Mercruiser, Wake tower, dual battery setup, premium sound, air pump and digital gauge pack along with a ton of other options including trailer for $83,000. Importantly though if you are looking to buy and you are a berth holder at Queenscliff Harbour, Aus-

(Continued on page 2)
Savwinch last year’s newcomer to the show made a return this year, with a bigger and better stand and a revised range of winch products. I really like these winches for the variable speed control function. Standard electric winches are often slow when letting out chain/rope unless you’re next to the winch and can release the clutch for a quick release, an almost impossible task when you are by yourself. The Savwinch allows you to drive to the mark and drop the gear minimizing wind and tidal drift and allowing you to position yourself more precisely.

Raymarines new range of touch screens, apps and ipad attachments also grabbed my attention. The new multifunction displays make Raymarines already simple menu’s even easier to use. You can also do away with the huge expense of adding a second screen simply by downloading the Raymarine app to your iphone or ipad, which will then allow the device to act as a secondary screen connected by wifi.

South Bay Eco Adventures

South Bay Eco Adventures (SBEA) has operated from berth 191 in the Queenscliff harbour for the past nine months. In this short time it has developed an enviable reputation for delivering a variety of exciting and informative tours throughout the southern end of Port Phillip and the back beaches of the Mornington Peninsula.

Mike Randall principal of South Bay Eco Adventures, has used his vast experience in boating and boat building, to create a purpose built vessel, "South Bay", ideal for operating in the sometimes testing conditions around the Rip area.

South Bay is a rigid inflatable boat powered by twin 250 hp outboards, similar in style to those used by special military and police services throughout the world. It is not quite as spartan as these boats, it has a toilet on board, passengers are protected from the sun by an awning and a large video screen is used to augment the crew's knowledgeable commentary.

There are four standards tours varying in length from 1 hour 15 minutes to 2 hours 30 minutes. All tours visit the seal colony at Chinaman's Hat and the gannet colony at Popes Eye. Discovery and Explorer tour passengers, depending on conditions, may see surfers riding the famous and dangerous Nepean Bank break and dolphins in the Point Nepean Dolphin Sanctuary.

At certain times of the year whales can also be seen in the Rip area. Explorer tour participants will see the rugged and inaccessible back beach areas of the Mornington Peninsula and also have the opportunity to see pilots being transferred between incoming and outgoing ships and the pilot boat.

Regardless of the season and conditions Mike and his dedicated crew will deliver an exciting and different look at Queenscliff and its surrounding waters. You can book a seat on board any of the tours or buy a gift voucher at the South Bay Eco Adventures' office at the Queenscliff Harbour or online or at:

http://southbayecoadventures.com/

For further information use the website above or contact Mike on 0427 701 596 or via Facebook.
Queenscliff Harbour Farmer's Market

It’s amazing how resilient our stall holders & visitors to the market are - despite cold weather & the occasional shower of rain the market just keeps getting bigger & better each month. Well done everyone!!

Each month at our market we look forward to introducing you to new produce to sample & here in this newsletter to providing you an insight to our producers.

Sancreed Flora: Ian & Denise McLaverty have been growing Proteas, Leucadendron & Leucospermum for 7 years on their 7.5 acre property in St Leonards. In order to build their dream home, it was conditional that farming be continued on the land. Plants that needed replanting each year didn’t appeal to them, however, something that would keep growing with the ability to harvest all year round did … 6,000 plants later they are now well & truly hooked on the lifestyle & in fact, Denise has retired in order to concentrate more of her time on the farm. The wet weather we have experienced in the past couple of months has proven too much for their drought resistant plants, so current bush numbers total approx 3,500 but that’s not a problem for these hardy souls - they will just plant more!.

One of my favourite proteas they grow is called “The Black Leopard” Protea lepidocarpodendron. As with all Sancreed Flora’s flowers, it is long lasting, but thanks to a couple of tricks that Denise shared with me they can last up to 4 weeks (or market to market!!). Make sure you cut the bottom of the stalks on an angle, add a couple of drops of bleach or sugar to the water, trim the bottoms each week & top up with fresh water. They are truly stunning in any décor. Ian & Denise are regular stall holders, so if you are not already one of their regular customers, make sure you drop by & say hello to them. Like all producers they love talking about what they farm & sharing their knowledge.

Fishing Report

The bay temperature is now around 12 degrees Celsius and this is obviously affecting the fishing

Typically for this time of year the weather has been fairly variable. Although the temperatures have consistently been in the low to mid teens, we have had a few days in the middle of the winter highs with bright skies and little wind. Despite these opportunities, there has been little fishing activity out of the harbour.

Most reports have indicated fairly mediocre results even for those who have been out regularly.

Some smaller whiting are still being consistently caught in the grass bed areas to the west and north of Swan Island.

The occasional larger whiting are being caught off the back of the football pavilion and along the area between Nuns and Dog Beaches. As usual when targeting whiting the tides are critical.

A few squid are also around for those willing to work the shallower areas along the same stretch of beach.

Most disappointing has been the failure of the arrival of gummy sharks in their usual winter numbers. Both commercial and recreational fisherman are reporting very poor catches.

Those willing to drift areas such as the channels are still getting reasonable catches of the ever reliable flathead. They might not be regarded as the most sporting of targets but they certainly can guarantee a good feed.

At a time when the catches are fairly poor, it is probably more important than ever to make sure we treat our catch in a way that ensures it arrives on the plate in the best possible condition.

The Japanese Ike-Jime method has a reputation for doing this. Below are some interesting sites which explain the method and compare the results with more common methods of handling fish.

Corrosion of Aluminium Boats

Aluminium is widely used in the construction of boats, from the ubiquitous car top “tinny” to large military and commercial vessels. It is also used in cast form to provide housings for things such as outboards, stern drives and anchor winches.

It is used primarily because it provides comparatively high strength with light weight and is relatively resistant to corrosion in a marine environment. It is ductile and thus easy to form into complex shapes. The qualifiers “comparatively” and “relatively” indicate that aluminium vessels have some inherent compromises in relation to both strength and corrosion resistance. This article will deal with the corrosion problems that can be associated with aluminium in a marine environment.

Aluminium is the third most common element in the earth’s crust, yet it is never found as a pure or “native” metal. Despite it being regarded as corrosion resistant, aluminium is actually highly reactive. It readily reacts with oxygen to form aluminium oxide Al₂O₃ known as “alumina”. This oxide coating, unlike “rust” on iron based alloys, is thick and tightly bound to the underlying metal. It is this that provides aluminium objects with their corrosion resistance. If the oxide surface is damaged mechanically it repairs itself by means of the underlying metal rapidly oxidising. It is when conditions exist, that enable the breakdown of the protective oxide coating that rapid corrosion of aluminium occurs.

The most common types of corrosion found on Aluminium vessels are:

- Galvanic corrosion
- Pitting corrosion
- Crevice corrosion

The aluminium alloys used for boat construction are generally high in magnesium, although they have lower strength than many other alloys, they are ductile, corrosion resistant and have good welding properties, characteristics that are particularly attractive for a boat building material.

Galvanic Corrosion

Galvanic corrosion occurs when dissimilar metals are in contact or there is an electrolytic connection between them. In the case of boats the electrolyte is water containing dissolved salts – primarily NaCl as in seawater. The metal that is the least “noble” of the pair will become the anode in an anode/cathode couple and will be corroded. Level of nobility is dictated by a metal’s position in a galvanic series. Below is a galvanic series including some metals commonly used in marine construction.

<table>
<thead>
<tr>
<th>Most Noble</th>
<th>Least Noble</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platinum</td>
<td>Magnesium and Magnesium Alloys</td>
</tr>
<tr>
<td>Gold</td>
<td></td>
</tr>
<tr>
<td>Graphite</td>
<td></td>
</tr>
<tr>
<td>Titanium</td>
<td></td>
</tr>
<tr>
<td>Silver</td>
<td></td>
</tr>
<tr>
<td>Stainless Steel 316</td>
<td></td>
</tr>
<tr>
<td>Monel (70 Ni, 30 Cu)</td>
<td></td>
</tr>
<tr>
<td>Cupronickels (60-90 Cu, 40-10 Ni)</td>
<td></td>
</tr>
<tr>
<td>Bronzes (Cu-Sn)</td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td></td>
</tr>
<tr>
<td>Brasses (Cu-Zn)</td>
<td></td>
</tr>
<tr>
<td>Inconel</td>
<td></td>
</tr>
<tr>
<td>Nickel</td>
<td></td>
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<tr>
<td>Tin</td>
<td></td>
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<tr>
<td>Lead</td>
<td></td>
</tr>
<tr>
<td>Lead-tin Solders</td>
<td></td>
</tr>
<tr>
<td>Cast Iron</td>
<td></td>
</tr>
<tr>
<td>Steel or Iron</td>
<td></td>
</tr>
<tr>
<td>Aluminium 2117, 2017, 2024</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td></td>
</tr>
<tr>
<td>Aluminium 5052, 6053</td>
<td></td>
</tr>
<tr>
<td>Commercially Pure Aluminium</td>
<td></td>
</tr>
<tr>
<td>Zinc</td>
<td></td>
</tr>
</tbody>
</table>

Galvanic corrosion can be minimized or prevented in the following ways:

- Insulating the metals from each other. This can be difficult in a marine environment, where the electrolytic bridge of the seawater can still form a connection between the metals even when direct contact is prevented due to the insulation. The most common metal used in conjunction with aluminium is 316 marine grade stainless steel. When stainless steel fastenings are used with aluminium a jointing paste such as Duralac, should be used. This provides an insulating barrier between the fastener and the aluminium. The barium chromate in the paste also has anti corrosive properties.

- Cathodic protection. This can be achieved in two ways. The most common and reliable is to connect an anode of less noble material in direct contact with the aluminium to be protected. The less noble material then sacrifices itself and is corroded preferentially to the aluminium. It is important that there is an electrolytic connection between the two metals. The anode will generally be zinc, an alloy of zinc or in some cases an aluminium alloy.

The anodes used to protect outboards and stern drives are generally of the aluminium alloy type. They have less tendency to develop a passive coating when in fresh or brackish water and when exposed to air for long periods.

There are potential problems that may arise when using this method.

- If the surface area of a sacrificial anode is too small or the distance between the anode and the extremities of the vessel to be protected are too great, protection will be reduced.

- The length of time that the anode is effective is directly related to its mass. The larger the anode the longer it will provide protection before it is reduced to a size where it becomes ineffective.

The number and size of anodes to be fitted is too complex to explain briefly here. A couple of sites that can give some insight into the calculations required are given below:


The other means of cathodic protection is to connect the aluminium to be protected to the negative pole of an external DC source. This method is exterior corrosion. This is why many aluminium boats are left in the “raw” and not painted. Paint can also be used, but this can introduce its own problems – see later.

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Severely depleted anode on stern drive leg

Corrosion under paint causing bubbling

(Continued on page 6)
Impacts

*Undaria* grows best in sheltered areas that have exposure to oceanic waters. It does not establish itself on exposed reef with high wave action. This seaweed if not controlled has the potential to spread to surrounding marine environments including Swan Bay and other areas of the Port Phillip Heads Marine National Park.

*Undaria* also has the potential to become a problem for marine farms and harbours by increasing labour costs due to fouling problems.

Identifying the pest

*Undaria* is an annual species. The seaweed is brown in colour and has a very noticeable mid vein (*light brown stripe*) which runs up the middle of the leaves. It also has frilly growth at the base which is present when the seaweed is about to spread its spores.

There are native brown/green seaweeds in the harbour which do not have the mid vein and they do not pose a threat to the marine environment unlike the invasive nature of *Undaria.*

Recreational and commercial boat operators can help prevent the spread of this pest by doing the following:

**Vessels on moorings or in harbour berths**
- Inspect you vessel and ensure there is no *Undaria* growing on it.
- Slip your vessel and apply approved antifouling regularly.
- Clear bilge water before leaving Queenscliff harbour.
- Check for *Undaria* seaweed attachments on propellers and hull, if present remove and dispose of correctly

**Boat ramp vessels**

Before relaunching in another location:
- Dislodge all seaweed from your vessel
- Drain all harbour water from your vessel
- Wash down and dry your vessel and all equipment exposed to harbour water

**Divers**

- No diving or swimming in harbour without a permit
- After diving wash and dry your dive suit and equipment before you re-enter the sea

**Anglers**

After fishing in Queenscliff Harbour
- Wash and dry fishing equipment used in the harbour before using elsewhere
- Do not discard harbour water or seaweed away from the harbour

If you suspect that you have seen *undaria*, please report it to the Department of Sustainability and Environment on the Customer Service Centre line 136186

(Continued from page 1)

**Harbour People**

Over the last few months, regulars at the Harbour would have become aware of a new face on the Harbour team. James Anderson has joined us to help meet the growing demand for services in the boat yard and the marina. A few questions revealed James’s wide experience within the boating industry.

Where were you working before you came to Queenscliff Harbour?

I was working at Sandringham Yacht Club - similar work, both in the boat yard and the marina. I operated the travel lift there. It was a smaller unit 40 tonne vs Queenscliff's 150 tonne. Prior to working at Sandringham I worked with Going Boating for about a year. They were dealers for Nautic wakeboard boats and Triumph fishing boats.

Did you have any experience in boating prior to starting in the industry?

I have primarily been associated with sailing, I am not really interested in power boats. My father Paul has been a long time member of Geelong Yacht Club. I started sailing Cadets when I was 8 years old. I competed in local club races for a number of years and then went on to keels boats. I sailed on Dad's 37 Cavalier and still do. We complete in the club summer and winter series.

I had some experience in the maintenance of boats prior to entering the industry. I maintained my Cadet and help Dad slip and maintain the Cavalier.

What was your most embarrassing boating moment?

I fell into water while lifting a boat out at Sandringham. I pulled on a rope that had not been properly secured, it came off the bollard and I fell backwards into the water. My boss, the boat owner and rest of the yard crew standing were right next to me.

What would be your ideal boat?

A Sydney 38 - it is a perfect size, a super competitive race boat and great cruising boat as well, a great compromise.

If you were a boat what do you think you would be?

A yacht - a Sydney 38, I'm generally relaxed and cruise along, but if need be I can be quick to.
Queenscliff Harbour Agents for Nautilus Marine

All Queenscliff Harbour Marina clients are eligible for a 10% DISCOUNT OFF THE TOTAL PREMIUM when their Nautilus insurance is organized through the Marina office. Nautilus Marine Insurance offers extensive cover over a wide range of vessels from PWC right up to multi-million dollar luxury vessels. Recently Nautilus introduced their “Master Mariners” cover that goes one step further by tailoring Insurance packages to owner’s specific needs. Items such as personal property up to $30k, specialized repairs, new for old replacement of electronics can be covered. So if your policy is almost up for renewal the please call the Harbour office 5258 5459 and we can provide you with an obligation free quote.

Nautilus Insurance is underwritten by Lloyds of London. It’s important that when considering insurance that you read the policy disclosure statement which can be obtained from www.nautilusinsurance.com.au

(Continued from page 4)

often used with large stationary structures but has some limitations and problems when used with boats, particularly those in close proximity to other vessels in marina or close mooring environments.

Pitting Corrosion

Pitting corrosion in the presence of an electrolyte is quite common in metals that rely on a passivity layer for protection such as aluminium and stainless steel. It can be caused by a number of factors:

Generally pitting in aluminium will be quite uniform across a large area and penetration will be limited, as the oxide larger becomes thicker and more stable within the pitted area. In this case it is generally an aesthetic rather than a structural problem. The surface becomes dull in appearance.

Occasionally deep and penetrating pits may occur. This is generally due to alloy inconsistencies, poor maintenance of painted surfaces or the build up of surface salt deposits within hull areas – most penetrating pits occur from within hulls, not on the outside. The most destructive pitting corrosion occurs when objects such as coins, lead sinkers and steel hooks are left in the bilges.

Pitting corrosion can be prevented by regular maintenance – the washing of surfaces, regular upkeep of protective coatings and the removal of metallic objects from within the hull.

Pitting is also reduced by cathodic protection.

Crevice Corrosion

Crevice corrosion is generally caused by the build up of liquid in narrow crevices. It also can occur under painted surfaces after the surface has failed at some point. The corrosion mechanism is related that which causes some pitting corrosion, acidity, low dissolved oxygen concentrations and chloride concentrations.

Crevic corrosion can be prevented by the use of sealing compounds to seal and fill crevices and design to minimize crevices where liquid buildup may occur. Regular upkeep of painted surfaces will prevent corrosion occurring under the paint surface.

The bottom line for the prevention of corrosion aluminium in boats is good general maintenance. Regular cleaning of salt buildup from all boat surfaces, preventing the entry of moisture into crevices, maintenance of protective coatings such as paint and careful selection and use of sacrificial anodes for boats that are kept in the water for extended periods.

Must Do’s - August / September

Many seaside communities go to sleep over the cooler months, but not so the Borough of Queenscliffe. If you are planning a winter weekend getaway, here are a couple of events to keep you & your soul warm!

Blues Train: Aug/Sept tickets on sale now www.thebluestrain.com.au
Queenscliff Harbour Farmers Market: Sun 19/8 + 16/9/12 9.00am – 1.00pm under the Harbour tower
Queenscliff Heritage Walk: Visitor Info Centre Hesse St Queenscliff (03) 5258 4843
Q Provedore: Cooking Classes with celebrity chef “Steph” Call 5258 1333 www.facebook.com/qseafoodprovedore
Or to find more about things to do - visit www.queenscliffe.vic.gov.au/visitor_home.php

Hi to all Queenscliff Berth Holders

Queenscliff Marine Services is “under new management” and would like to offer a free, no obligation inspection of your vessel which will include safety gear required by law, radio check, navigation lights and bilge pump operation.

Our technicians will also carry out a visual inspection of your engine and propulsion system and report on anything which may require maintenance or repairs.

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