



AMATEUR BOAT BUILDERS' ASSOCIATION

June July 2015

EUN NA MARA — BIRD OF THE SEA



Eun Na Mara was originally designed by William Fyfe of Scotland as a gaff rigged cutter. She was launched in Sydney in 1907 with the name Awanui. She was later named Culwalla III but this was again changed to Eun Na Mara in 1910 and registered at the Royal Brighton Yacht Club in Melbourne.

When Eun Na Mara was bought to Perth by Neil McAlister, she had a Bermudian rig. After Norm Cocks became her new owner she was sailed from South of Perth Yacht Club for many years. Along the way she returned to Victoria for an extensive restoration that included a new mast and dynel sheathing of the hull. Following this work she was successfully sailed on the east coast. A few years ago, Eun Na Mara was bought to Perth by her current owners, Ralph and Lynne Newton and has returned to her former home at South of Perth Yacht Club. These details come from Rick Steuart's informative website www.perthsailingphotography.weebly.com. Rick's site documents the work being done so far on Eun Na Mara together with excellent photographs. The site will continue to be updated as the work progresses.

ABBA members and friends were fortunate to be invited to spend a few hours on a rainy Saturday afternoon in July listening to a presentation by owner Ralph Newton and ABBA life member and Naval Architect, Kim Klaka followed by a guided tour of the work done so far with refreshments by Mike Wade and Peter Russell.



Ralph's association with Kim Klaka started some time ago when Ralph stood on the coach house roof at the base of the mast and felt the roof move a little more than he was comfortable with and noticed the 10-15 degree mast tilt. Little did Ralph realise that this little problem would lead to the major renovations being undertaken at the Maylands Amateur Boatbuilding Yard. Ralph is working full-time alongside shipwright Nic Truelove with guidance from Kim.

Kim Klaka, spoke about the 3 aims of the project

- Make the vessel structurally sound.
- Return the appearance and design back to the original configuration where practical.
- Make the boat easier to sail and hence reduce the number of crew.

The work required to achieve these aims include;

- Changing from a masthead to a 3/4 or 7/8 rig to replicate the 1931 configuration.
- Lifting the gooseneck fitting 300 – 400 mm to raise the boom while retaining the current sails with only minor re-cutting.
- Fitting a furling headsail to make it easier for the crew.
- Removing the reverse stern and rebuilding it to replicate the original traditional transom design.



Ralph spoke about some of Eun Na Mara's history and pointed out some of the problems that started him on this project together with some problems that have only recently been uncovered.

At some stage the original keel-hung rudder was surgically removed with a chainsaw and replaced with a dagger rudder.



The inadequately supported mast was tackled by reinforcing the existing aluminium bulkhead and rebuilding the mast step. Ralph can now stand at the base of the mast without there being any noticeable deflection.



At some time in her long history, 30x30x8 steel angle frames secured with steel bolts were installed. These had corroded and fell apart when handled. These frames will be replaced in timber. Similarly the metal bow structure was removed and rebuilt in timber.



A disaster waiting to happen was the severely corroded sections of the aluminium chainplates which were hidden from view. These have been replaced with stainless steel.



The reason for rudder shimmy found to be due to corrosion around the boltholes of the aluminium rudder post support.



The boat will be set up for river racing but removable stanchions will be fitted for the occasional ocean race. Ralph intends to enter a Bunbury and possibly a Geraldton race. A teak deck will be fitted and Brazilian mahogany will also be used in the re-fit. There will be 120mm bulwark to keep some of the water out and new rubbing strakes. Waterproof covers will be made to protect the timberwork.

The boat was originally planked with New Zealand Kauri but after only 5 years it was replaced with 25mm Huon Pine. The hull was later Dynel sheathed but the hundred year old Huon Pine underneath is still in perfect condition.



The 30 hp Volvo MD203 and Hurth gearbox pushes the vessel along at 8 knots.

I am sure that with the well thought out repairs and restoration, together with the obvious high standard of workmanship and hours of hard work, we will soon see the 109 year young, Eun Na Mara back on the winner's list.

Original name "Awani" later "Culwulla III" Renamed in 1910:

"EUN NA MARA"

Gaelic meaning
BIRD OF THE SEA

DESIGNED BY WILLIAM FIFE III IN 1905 (DESIGN NUMBER 520)
DESIGN: CUTTER 36 LINEAR DESIGN ("36-RATER") by "WATERBURY" FILE 58/116
BUILT BY W.M. FORD AT BERRYS BAY, SYDNEY HARBOUR
MATERIAL: HUON PINE
LAUNCHED: 19TH FEBRUARY 1907

1907:	1 ST	GASCOIGNE CUP, BEAUCHAMP CUP	
1908-9:	3 RD	BASIN CUP TO LION ISLAND TO SYDNEY	
1909:		CARLETON AND BEAUCHAMP CUPS, BALMAIN ANNIVERSARY RACE, RSYS & PAYC CHAMPION	
1910:	1 ST	RYCT: CARNIVAL RACE, 1 ST ; BRUNI ISLAND RACE	
1910:	1 ST	SAYONARA CUP IN 1910 (PRESTIGIOUS EVENT BETWEEN NSW AND VICTORIA)	
1911:	1 ST	GASCOIGNE CUP	
1912:	3 RD	RPAYC BASIN CUP TO LION ISLAND TO SYDNEY	
1912:	1 ST	PAYC KING EDWARD VII TROPHY	
1913:	1 ST	FAIRFAX CUP, 1 ST RPAYC MARSHALL PLATE	
1914:	1 ST	RPAYC MARSHALL CUP, 1 ST MORNA CUP	
1919:	2 ND	RSYS & RPAYC VICTORY RACE	
1920:	1 ST	RPAYC MARSHALL CUP	
1922:	1 ST	VYRA PERPETUAL CUP	
1925:	1 ST	MORNINGTON CUP RACE	
1926:	3 RD	VYRA PERPETUAL CUP	
1926:	1 ST	COLLISION WITH ACROSPIRE III, PORT PHILLIP BAY, VICTORIA	
1926:	1 ST	HOBSONS BAY YA A CLASS, 1 ST RBYC CHAMPION	
1927:	1 ST	VICTORIAN YRA CUP	
1927:	1 ST	VYRA CUP	
1928:	3 RD	RPAYC BASIN CUP TO LION ISLAND TO SYDNEY, 1 ST ST KILDA YC INVITATION RACE	
1929:	3 RD	BEAT ACROSPIRE IV	
1934:	1 ST	INTERNATIONAL CUP	
1940:	1 ST	RST.KYC CACTUS CUP (5 TIMES)	
1949:	1 ST	BUNBURY RETURN RACE	
1962:	1 ST	BUNBURY RETURN RACE	
1963:	1 ST	BUNBURY RETURN RACE	
1964:	1 ST	BUNBURY RETURN RACE	
1965:	1 ST	AUSTRALIAN IRC CHAMPION, HAMILTON ISLAND, QUEENSLAND	
2001:	1 ST	AUSTRALIAN IRC CHAMPION, ADELAIDE, SOUTH AUSTRALIA (WINNING UNTIL LOSS OF BLUDDER IN FINAL RACE)	
2002:	1 ST	DNF: AUSTRALIAN IRC CHAMPION, ROCKINGHAM	
2015:	1 ST	COCKBURN SOUND REGATTA, "SWAN RIVER RETRO SERIES"	
2015:	1 ST	FASTEST TIMES IN 6 OF 7 RACES - "SWAN RIVER RETRO SERIES"	

Handwritten notes in the table:

- 1927: ALTERNATE IN RACE BY AGE
- 1928: ACROSPIRE III RACE TO BUNBURY ISLAND
- 1928: 1ST INTERNATIONAL RACE A.M.
- 1928: 1ST INTERNATIONAL RACE A.M.C.
- 1927: 1ST INTERNATIONAL CUP
- 1927: 1ST INTERNATIONAL CUP

CURRENT OWNER: RALPH NEWTON, SOFPYC..... (MOBILE 0419.191.565) CREW ALWAYS WANTED !!

Many thanks to Ralph, Kim and Nic for generously giving up their time to enable ABBA members to gain an in-depth appreciation of the restoration of this Classic of Australian sailing history.

Editors Note: Many thanks also to Bruce Cadee for this write up whilst your editor was absent.

Kim Klaka and a friend arrived for the Toolbox Visit in style when they rowed in on a Venetian Sandolo. About 2 years ago Kim designed and built the 6m sandolo, with 2 friends contributing. It's 6mm plywood stitch-and-glue and has no metal fastenings.





An earlier photo of the Sandolo on the occasion of its launching

Gary Martin on Boat Paints

Gary has been involved in the paint industry since 1975 when he helped his father and grandfather with boat painting at South of Perth Yacht Club. He was apprenticed to his grandfather at the time and spent his first five years in the automotive painting industry. Here he was working with what he called 'old technology' but when he then moved on to painting boats he took with him some of the techniques used only in the auto industry at that time. He introduced the use of random orbit sanders to the boat painting scene and was the first professional to use spraying equipment to paint boats.

In his closing introductory remarks, Gary indicated that he has always been interested in the technical side of painting and this has now become his passion in the boating context. His background is as a tradesman, having painted some 7000 vessels over his career – aluminium, timber, fibreglass and carbon fibre ranging in size from canoes to ocean going luxury motor yachts – and he emphasized that he was not a salesman. During his time in the trade, he spent six to seven years with the Eagle Americas Cup syndicate which later resulted in his being sought out to paint the Whitbread/Volvo around the world racers. Subsequently, he painted all the boats in this fleet.

Gary commenced his technical presentation by identifying key areas essential to a top class paint finish – something that at the end of the job, we would all be proud of. These were right **environment**, proper **preparation**, correct **paint**, correct **equipment**.

Environment

The atmosphere needs to be at less than 80% relative humidity. Above this value, hardeners draw in the moisture and evidences as paint blisters when it is later released. The paint itself must be kept cool in storage and contaminant free. Gary particularly made the point that rags used for wipe down or for solvent can contaminate the whole solvent container, the paint and then the job. He cited contaminants as the painter's biggest enemy and critical to achieving the best paint job.

Preparation

All substrates oxidise – aluminium the quickest followed by steel, timber and fibreglass being the slowest. In addition, previous paint coats themselves oxidise and need appropriate preparation before application of fresh paint coats. This includes anti fouling paints which need the hydrolysed layer wet blasted off but then require wet sanding to get the best adhesion and longer term performance from the new paint coat. In general terms, best adhesion is gained by surface preparation of 80 microns. As a reference, sandblasted metal has a surface of between 80 and 120 microns.

Paint

Both single pack and two pack paints are suitable for boating applications. Single pack is not as hard but is more flexible whilst two pack lasts longer in the sun – by a factor of up to ten fold. Single pack is either alkyd or polyurethane technology and hardeners can be added to improve this aspect of performance whereas two pack requires more attention to safe handling practice as it contains isocyanurate which is carcinogenic.

For single pack paints, a thinned down mix of the appropriate primer can perform well as a sealer. For two pack, application of an epoxy resin sealer such as International Everdure is recommended even though these products do not now contain the rot proofing agents that they once did. Following rubdown with 320 grit paper, the paint build up recommended is a primer plus undercoat plus topcoat for single pack and a primer/undercoat plus topcoat for two pack. Top coats should be rolled on and then tipped off with a brush. Care needs to be taken to achieve the correct thickness – too thick a coating will lead to cracking and too thin oxidises quickly and does not provide the required finish and protection.

Gary pointed out that in broad terms, boat paint materials and techniques have developed from the automotive industry and noted that the use of polymer wax three months after completing a paint topcoat or after seven to ten coats of varnish would greatly improve the life of the job. In addition, some paints can be cut and polished following application (acrylic urethanes) whilst others (linear polyurethanes) acquire their final finish from the quality of the application and cannot be cut and polished afterwards.

Anti Fouling Paints

There are some examples around where fouling has not occurred over a long period of time without application of a specific anti fouling product. Gary cited the supports on the Tower Bridge in London which have been in place for over 100 years and have apparently not fouled with marine growth. However, this is generally not the case in the boating arena and some form of anti fouling protection is required below the waterline. Cuprous oxide paints or copper thianate (for aluminium vessels) have now completely replaced the now outlawed tributal tin based paints used until about twenty years ago and which have serious negative impacts on our environment. Interestingly, Gary noted here that families of sea horses had returned to the waters of Fremantle Sailing Club marina since the phase out of these paints.

Other ad hoc approaches such as the use of Indian Ink or white of egg on props and shafts have prevented growth build up in some marine circumstances. Only the round the world Volvo/Whitbread boats that constantly do over 30 knots are not subject to fouling and do not use anti fouling paint.

Film Thickness

For metal surfaces such as aluminium, products such as zinc chromates were used in the past to prevent corrosion. These paints were carcinogenic and are no longer available. Corrosion is now prevented by achieving a satisfactory film thickness via the painting process. Zinc rich coatings need to be 75 microns film thickness, otherwise they separate. Two pack top coats at 10-12 m2 per litre will result in a film thickness of 100-125 microns and high build epoxies need to be up to 290 microns thick. As a comparison, a human hair is 60 microns thick.

Decks

Teak decks are best cleaned by use of saltwater and a Scotchbright pad working across the grain. The majority of commercial cleaners and brighteners contain oxalic acid that attacks the sealers in the seams. Any residue remaining falls to the bottom of the seams and each time the area is wet, the sealer break down process advances.

Older Paints

The question was asked as to how older paint stock, probably with a hard crust above the liquid, can be expected to perform. Gary pointed out that some of the key paint ingredients are contained within the hard crust and therefore no longer in the paint mix so the paint will not perform 100%. As a general rule, manufacturers recommend a two year life. However, if the paint is entirely liquid after a longer time, it is likely it will perform satisfactorily.

In closing, Gary indicated that he specialised in Norglass and Hempel products and is also very familiar with International products. He is passionate about boat paints and their application and is happy to share his knowledge with members who may require his specialist advice.

We thank Gary for sparing his time to share so much of his thirty years of experience and knowledge in this industry with ABBA members in this technical presentation.

ADMINISTRATION NOTES

ABBA COMMITTEE

President/Editor	Chris Davis	9387 5042
Sec/Treasurer	Bruce Cadee	9259 0844
General Committee	Rob Bingham	9246 0202
	Ed Essers	0406 050 989
	Harry Speight	9295 4518
Library	Rosemary Nayler	9455 1470

APRIL TECHNICAL MEETING

Our next tech meeting will be on Wednesday 1st April, as usual in the Heritage Room at South of Perth Yacht Club, 7.30pm for an 8pm start. This will be a 'Show n Tell' with presenters Harry Speight, Ed Essers and Rob Bingham.

Harry will be giving us a detailed account of the mast repair to his Farrier F82 after it was blown over in September 2013 whilst trailer stored at TCYC. Ed will be talking about making chainplates for his 14m Mobjack design Herreshoff Ketch and will bring us up to speed with photos and latest progress on his major aluminium building project. Rob Bingham will be talking on a mystery subject but no doubt related in some way to the recent launching of his 38 ft Halvorsen "Karrawa". With Rob's presentations track record I'm sure there will be plenty of interest for all.

MAY TOOLBOX VISIT

The next Toolbox will be on Saturday September 5th, as usual 2.00pm to 4.00pm. This Toolbox visit will be to the workshop of shipwright, Igor Bjorksen to see an old gaffer he's restoring. Igor has been working on boats since he was nine, this being as a volunteer in the restoration of a schooner in Melbourne. After ten years on this project, he went to sea on square riggers, sailing on the Leeuwin when first launched, and has skippered various sailing ships during the 1990's. During this time he worked as a rigger during construction of the Endeavour and Duyfken replicas, and as a shipwright on the Duyfken. He has travelled throughout Australia and overseas as an itinerant rigger, but having met his wife-to-be whilst sailing, and with the arrival of kids, he put down roots in the steady vocation of shipwright (though he still carries out rigging work for the Leeuwin and other Oz based ships). Initially, he was based at C-Shed, Victoria Quay, before moving to his current workshop when C-Shed was closed. The boat we'll be seeing in his workshop is Maggie (previously Ethel), an 1886 gaff cutter, home built to an unknown racing design. She is thought to have started as an open boat, and had a varied racing career under a number of rules until she was retired from racing in 1920. She was in Tassie at the time and was converted to a cruising yacht with (as was common for Tassie conversions) a cabin being built out to the gunnels. Having been brought to WA, she has for many years been moored on the Swan at Freshwater. Following a beaching due to a broken mooring, her owner has decided to have her restored, thus providing Igor with several months of solid work. We'll be seeing progress on Saturday 5 September at Igor's workshop; Unit 2/5 Brockman Place, South Fremantle.

SPECIAL NOTE -- SHIRTS & ABBA LOGOS

Don't forget — if members wish to bring along their own shirts to the next meeting then Bruce Cadee can arrange for logos to be embroidered. Members can bring as many shirts as they like but the club will pay for up to 2 logos. If we could do this in batches if at all possible this would be best for our supplier.

ADMINISTRATION NOTES (Cont'd)

ABBA LOGO

Members are reminded that Bruce Cadee has made arrangements with Shaun Luong of Image Embroidery at 26 Tulloch Way, Canning Vale (Phone 9456 2324 Mobile 0403 250 389) for an embroidered ABBA logo. The logo can be applied to your own clothing (assuming it can be accommodated in their equipment) or to shirts, caps or hats purchased through Image Embroidery. Feel free to call in on Shaun to look at the limited range of clothing he has on site or visit the following web sites to choose your preferred style, size and colours. The weblinks below are only examples of the wide range available. Half chest measurements are included on the web sites to help ensure you select the correct size. Ladies styles are also available.

Clothing (excluding Logos)

Style 1300 – Aussie Pacific Mens Murray Polo, Navy/White/Ashe or White/Navy/Ashe - **\$20.00 + GST each**

Weblink: http://www.aussiepacific.com.au/the-murray-polo-navy-white-s?color=Navy%2FWhite%2FAshe&primary_color=Navy&secondary_color=White

Style 1304 – Aussie Pacific Mens Eureka Polo, Navy/White/Ashe or White/Navy/Ashe - **\$21.00 + GST each**

Weblink: http://www.aussiepacific.com.au/mens/polos/eureka-polo-sky-navy-s?color=Sky%2FNavy%2FAshe&primary_color=Sky&secondary_color=Navy

Hats/Caps (excluding Logos)

Style 4199 – Headwear Brushed Heavy Cotton Cap, White/Navy (many other colours available too) - **\$6.50 + GST each** **Weblink:** <http://au.headwear.com.au/productDetails.cfm?&prodID=53&prodCatID=2&pageNumber=1>

(Also refer poly/cotton legionnaires hats Styles 4057 or 4126 for maximum sun protection under website sub heading 'Hats, Visor & Beanies' <http://au.headwear.com.au/productList.cfm?&pCategoryID=7>)

Style 4199 – Headwear Brushed Heavy Cotton Cap, White/Navy (many other colours available too) - **\$6.50 + GST each (includes poly/cotton legionnaires hats for maximum sun protection under website sub heading 'Hats, Visor & Beanies')**

Weblink:

Style 4223 – Brushed Sports Twill Bucket Hat, White/Navy (many other colours available too) - **\$8.00 + GST each**

Weblink: <http://au.headwear.com.au/productList.cfm?&pCategoryID=7&page=2>

To make your annual membership even more value for money, ABBA will pay for up to 2 logos per financial year to be applied to your items of clothing. The current cost to ABBA is \$7.15 per logo. There is no intention for this to be an ABBA uniform so the choice of style and colour is totally yours. If you are seen wearing the logo while building, working on or using your boat or anywhere for that matter it might get people asking questions and wanting to join our association. You are free to deal direct with Image Embroidery but please ensure you get an itemised invoice showing a separate price for the logo and present this to Bruce Cadee for reimbursement. Bruce Cadee is happy to take orders and liaise with Image Embroidery if you so wish.