# FOSSICKIN' ROUND

THE VICTORIAN SEEKERS CLUB BI-MONTHLY NEWSLETTER

Vol. 35 issue 1

January/February 2014





#### The Victorian Seekers Club Inc.

Is a family oriented organization, the objectives of which are to promote friendship, cooperation and exchange of ideas among people interested in prospecting and metal detecting. To realize these aims, we have meetings, lectures, discussions and practical demonstrations to help members acquire the skills required to make prospecting and metal detecting an enjoyable and rewarding pastime. We arrange outings to the goldfields and other prospecting sites, beaches, camps, ghost towns etc, to search for gold, coins, relics, gemstones and other natural and man made objects of value and / or of interest. In addition, we also have functions to foster social contacts among members. Our conduct is governed by a strict code of ethics including avoiding trespassing on private property or damaging the natural environment, hence our motto:

#### "Seek, But Do Not Destroy"

Membership is open to adult persons and their minor children without regard to race, creed or political persuasion, who are interested in these pursuits and prepared to abide by our Constitution and Rules of Conduct. VSC has general meetings on the first Wednesday of each month (except January) at the Mulgrave Senior Citizens and Community Centre, 355 Wellington Road Mulgrave, and at a field trip each month and, in addition, we also have some occasional day outing.

Annual Membership Fees
Family Membership: \$40.00
Single Membership: \$35.00

One-off joining fee: \$10.00 single, \$20.00 family. Subscriptions are due and payable by the 1<sup>st</sup> of July each year.

Website: http://seekers.metapath.org/

email: xxx@xxx

PO Box 15, Mt Waverley BC, VIC 3149

**Committee of Management** 

PRESIDENT: Eric GRUMMETT

email; xxx@xxx

Club management/ representation, Chairperson of meetings.

VICE PRESIDENT: Barry WESTON

President's deputy, arranging speakers.

SECRETARY: John CLOSE

Correspondence, rules, meetings, admin. matters etc.

TREASURER: Warren IBBOTTSON

Budget, finance matters (other than subscriptions)

NEWSLETTER EDITOR: Ian SEMMENS

email: xxx@xxx

Typing & setting out Newsletter.

MEMBERSHIP SECRETARY.. Warren IBBOTTSON

Subscriptions, membership records, changes of addresses, etc.

Email: xxx@xxx

RESEARCH OFFICER: Rob SHANNON

Information about outings, field activity and site control.

### **Events Calendar**

#### January

No General Meeting.

Fri. 24 - Mon 27th: Camp Chute

#### **February**

Wed 5th: General Meeting.

Fri 14th - Mon 17th: Camp Clydesdale

#### March

Wed 5th: General Meeting.

Fri. 7th - Mon 11th: Camp Wedderburn

Sat. 8th - Sun 9th: Wedderburn Detecting Jamboree Sun 24th - Australian Gold Panning Championships

**Blackwood** 

#### **April**

Wed 2nd: General Meeting.

Fri 18th - Tues 22nd: Camp Fryerstown

## Editors Report

by Ian Semmens

I am still in need for of any news, stories photos and articles of detector activity. Please email to me at xxx@xxx

Prospecting is an enjoyable activity however there are some inherent dangers on the goldfields. Members are responsible for their own safety. Take care around any open shaft and when walking through the bush. Carry a mobile phone and water and the usual emergency provisions such as GPS, compass, first aid kit, torch, matches, UHF radio, snack bar. Be aware of hazards such as snakes. It is not advisable to prospect alone. Team up with a mate.

#### The Victorian Seekers Club Inc.

Website: http://seekers.metapath.org/

General Meetings are held on the first Wednesday of each month (Except January) at the Mulgrave Senior Citizens & Community Centre,

355 Wellington Road, Mulgrave, MELWAYS (80, C1). Meetings start at 8.00 pm sharp, punctual arrival would be very much appreciated.

General meeting dates for 2014: Feb 5, Mar 5, Apr 2, May 7, Jun 4, Jul 2, Aug 6, Sep 3, Oct 1, Nov 5, Dec 3.

**Committee meetings for 2013:** Feb 4, Feb 25, Mar 25, Apr 29, May 27, June 24, July 29, Aug 26, Sept 30, Oct 28, Nov 29.

### President's Report

by Eric Grummett

Happy New Year to all, here we go for yet another year, our club's 34<sup>th</sup> and after about 400 trips into the gold fields we are still just as keen as ever to go in search of the yellow rocks. Of course, for most of us who find very little these days, it's more the camaraderie among members and the healthy life while camping in the bush that drives us. Let's hope the club (and the gold) survive another 400 trips.

Our committee have had a serious think about the club's duty of care to members while camping out in the bush, particularly in regards to bushfire danger in the hot weather periods. In the past, not enough information has been available to members to make individual decisions in times of an emergency. Luckily for the club, over all the years we haven't had to cope with any major issues such as camp evacuation or search and rescue, but it could in the future, especially considering the age of many of us. Communication these days has improved dramatically, with better phone coverage and smart phone applications making it more possible to contact members out in the bush.

To account for members at camps we have introduced a sign in book that we ask all members and visitors to sign on arrival and tick off when going home so we know who is at camp at any time. More information on this and changes to our rule book will follow soon. A test run of our procedures occurred on our Xmas camp at Goldsborough, when after a 38 degree day, a wind change brought with it smoke from a fire somewhere which created concerns, but a quick referral to the CFA info line put the fire over near Ararat allaying any of our fears.

An unfortunate accident occurred at the Goldsborough camp on New Year's Eve . About 20 of us were celebrating the night when just as we were about to sing *auld langsyne*, a very sober Francois tumbled back off his chair when the stitching gave way, landing on the back of his neck causing severe injuries to his upper spine. An ambulance was called which took him to Bendigo and then onto the Austin in Melbourne when they realised he needed specialist care. A five hour operation was required to repair a cracked vertebra and nerve damage. At the time of writing, his right arm is not responding which could be permanent. Hopefully, rehabilitation might improve it's use. Because he also sustained some spinal cord damage, doctors say he is lucky not to have paraplegia. His left arm and legs seem to be ok thankfully.

Don't we live a very delicate life when something simple as falling off a chair can be life threatening. These days we tend to worry about our body parts wearing out, when something as stupid as this can put a whole new perspective on life. On behalf of our club we hope and pray that Francois can make a satisfactory recovery to continue a full and purposeful life. Our love also to Francine and for strength to cope with the difficult days ahead.

(continued next column)

(continued from last column)

This year looks interesting in the detector industry with Garret coming out with a mid range PI detector called the ATX that in some respects supposedly is better than Minelab. It will take a lot of convincing, and good luck if they can. I notice Minelab are also bringing out a mid range model which looks very much like the Garret. Most interesting times indeed

The best of health to all. ERIC

# For Sale



#### Jayco 2004 Freedom Pop Top Caravan 14 x 7 ft.

Ideal for bush camping.

With twin water tanks (120 litres), solar panel, battery, hot water service, microwave,

twin 9kg gas bottles, two single beds, external shower, single axle with leaf spring

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#### Disclaimer:

Opinions expressed in this newsletter do not necessarily reflect that of the VSC Committee.

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### Nov. Camp Report

### **Craigie**

by Virginia L

Photos by Ian S.

Well, what a large camp this turned out to be! I believe the count Saturday night was 75 people. It was good to see some faces we haven't seen for some time. And how lucky were we with the weather, plenty of sunshine without being too hot. This brought the "Ladies" walking group out even if the numbers have dwindled. Anyone is welcome to join us for our walks and we usually start around 10 am although we may start earlier if the weather is going to be hot. Don't be shy come and join us.

The Saturday night festivities were again a success. Great to see everyone getting in the spirit of things and contributing to the dinner. There were lots of salads and sweets to compliment the chicken supplied by the Club. We even had hor d'oeuvres. Nola and Geoff surpassed themselves, dressing up as Brynne & Geoff Edelsten, Francine flaunted her wealth with "gold" coin decorating her outfit. Other participants of Fashion of the Field were more traditional, looking very smart in their hats. Well done to all who made the effort.

While I am thanking people, on behalf of the Club I would like to thank the following for their contributions, giving up their valuable gold detecting time in doing so:-

Peter M demonstrated his new wiz-bang inclining tube coil tester, which allowed members to test at different levels by sliding targets down to a depth of 600mm. (I believe Eric thought he lost his 3 ounce nugget in one of the test holes. Someone else had thrown a piece of lead into the same test hole!)

John B took out inexperienced members to a known old gold producing area for lessons and settings. We ended up with a convoy of 13 vehicles.

Lindsay spent time with young Anthony giving him a crash course on how to use Sam's 4500.

On the whole small gold was found. Geoff L found a couple of nice pieces - a 3.5gm and a 13.5gm on Cup Day. We heard that Marius finished up with quite a swag.

On display over the weekend there were a couple of nice nuggets, one of 76 grams and a giant specimen with 9 ounces of gold, that were found recently by club members. Also on display was Herman's 90 grammer and a visitor had a 9 ounce nugget to show off. I am sure everyone who viewed these was envious.

Thanks to Lars, we had 3 sweeps for the Melbourne Cup. Ron H won 2 sweeps (he had entries in 2 sweeps) and Gerd won the 3<sup>rd</sup> sweep. Second places were won by Brian S, Nola and Virginia. Third places were won by Eric, Ted and his lovely lady Judy.



Joan detecting

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Craigie Campsite.



Bob detecting



Kay giving it a go.



Geoff K. detecting



Noela having a swing.

## More Craigie Photos



Geoff L's 13.5 and 3 gram nuggets.



The women's walking group



Around the campfire Peter, Karen, Ralph, Geoff K. and Kay.



Fashions on the Field - Craigie camp style





### **Xmas Camp Report**

### Goldsborough

Words & photos by Geoff L

Christmas-New Year camps are usually a bit different to most camps, what with everyone busy finishing off Christmas engagements and prepping up for New Year. This camp was no exception with members coming and going throughout and anticipating the New Year. Santa was especially generous this year with three new caravans turning up.

Overall the weather was good except for Saturday with 38°C but that was well timed with a club dinner at the Dunolly Pub. Thankfully all nights were cool. Surprisingly and to everyone's relief, only a few insects were around. Following the Bush Fire alarm at Craigie, this camp was the first trial of the Club's new Bush Fire Readiness procedures. Essentially, members sign-in on arrival at camp and sign-out before leaving for home. The trial went pretty well, however members do still need to take communications more seriously. One day when smoke blew in from bushfires at Avoca Eric G announced this over Channel 16. Unfortunately he was met with silence - not good.

Member numbers varied with around 35 in total and 23 at the New Year's Eve celebration. Unfortunately just before midnight Francois fell backwards out of his chair, hit his head and was unconscious for a few minutes. The following morning, suffering neck pains he was taken by ambulance to Bendigo then transferred to Melbourne. He has since had surgery to his neck and is currently recovering at home with some nerve damage. Get well soon, Francois.



John B was very gracious and organised a tutorial session for members to help them understand and use their detectors. He obviously chose the right location for this tutorial and gold was soon uncovered. James S was especially pleased as he uncovered a 5gm nugget followed by others for a total of about 9gms. Various other members also found gold there, including Peter S with a 4gm nugget close by. Geoff L was also especially pleased finding a 15gm nugget and a couple of others for about 21gms, at a different location.



Overall, some ups and downs but certainly a camp to be remembered.



Francios & Francine before the accident.



Peter an Gisela in Party mode.



Kay & Bruce.

### More Goldsborough Photos



James on his Patch where he found a 5 gramer for total of about 9 grams.



Eric presenting Herman with the 'Find of the Month' plaque

## Gold Price Report

By Ian Semmens

#### 60 Day Gold Price in AUD/q



Price as at 09/01/2014

### New Members

- Darren & Leanne K
- Pili F
- Anthony H
- Ken M
- Chas & Sue J



Welcome and Good Luck!



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Fossickin' Round

### News

### Clamping down on camping, but why?

Government moves to charge for the joys of the outdoors are sneaky and mean.

By Dr Bill Garner

From The Age, 08/01/2014

The Department of Environment and Primary Industry was mistaken if it thought it could sneak in a proposal to abolish free camping on the back of general fee rises for camping in national parks.

Campers are alert to the free camping situation because it is dear to their hearts. Little saddens them more than its gradual disappearance - unless it is the disappearance of camp grounds altogether. The main reason campers value free camping is not because it is free but because it is customary.

Free camping on Crown land is a practice that dates back to first settlement. Older campers (especially Grey Nomads, a group particularly attached to free camping), remember that until the 1960s it was normal to camp by the side of the road. And a certain amount of free camping has always been allowed in Victoria's national parks until next March, if the department has its way.

Campers accept that they should pay to use well-serviced camp grounds, but the free sites in national parks are only those the department classifies as "basic" and "very basic", meaning they depend on campers being largely self-sufficient. The regulatory impact statement recently released by the department acknowledges that basic camp grounds are highly popular with campers: it is there that "real" camping is possible. When campers are asked, they say they do not want more services or more ranger visits - they just want to be left alone: they value independence and self-reliance more than cosseting by Parks Victoria. You would think neo-liberal governments would

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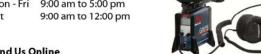
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want to encourage such values by providing more opportunities to exercise them.

The regulatory impact statement invokes the government's cost recovery guidelines, insisting that it is obliged to end free camping because it is unfair to commercial camp ground operators. In doing so it applies the principle of "competitive neutrality" that is intended to protect private enterprise from "unfair" competition from state agencies. But at the basic and very basic free camping levels no comparison with commercial rates is possible because there is no market. Commercial operators do not offer such primitive sites and at the suggested fee of \$13 per night there would be no profit in doing so.

The cost recovery guidelines do allow costs to be weighted against benefits, and allow exemption from full cost recovery for activities that deliver social benefits, including protection of cultural heritage. In its impact statement, the department rightly boasts that national parks play a vital role in doing this. The problem is that it fails to recognise free camping, or camping in general, as part of our cultural heritage. If there were an informed appreciation of the role of camping in the evolution of our culture and also as a profound way of engaging with the environment, it would be much less likely that free camping would be seen as an easy - or appropriate - target for cost recovery.

The free camping sites are not major cost centres for Parks Victoria. The risk is that improving services would add more to costs than can be retrieved in fees. The guidelines warn agencies against this, of pursuing their own self-interest by inflating of levels of service beyond the needs and wishes of the stakeholders. If, as seems likely, the cost of collecting fees at the basic level does exceed the value of the fees retrieved, then the abolition of free camping would be financially irrational.

There is something plain mean about this proposal, especially as the department threatens to close down camp grounds unless costs can be recovered. And the issue is set to broaden as the department indicates that it intends to introduce fees in state parks as well. But this is just a new version of an old story. Bringing campers - indigenous and non-indigenous - under control has been a goal of authorities from colonial times to the present. Around the country, they are now closing in on the remaining sites operating outside the market: remnant free camping is a last stand against the total commodification of the Australian holiday. Ironically, abolishing it will encourage feral camping, which will be much more costly to manage.

A government that genuinely accepted the social benefits of national parks should want to extend free camping rather than shut it down. If this seems fanciful, two years ago Queensland seriously considered introducing free camping in national parks as an incentive for people to visit them. New citizens especially should be encouraged to go camping, for, as generations of settlers have discovered, nothing allows us begin to feel at home in this landscape better than camping in it. It's the old way.

#### Dr Bill Garner is the author of Born in a Tent: how camping makes us Australian.

Read more: http://www.theage.com.au/comment/clampingdown-on-camping-but-why-20140108-30hhb.html#ixzz2qDsYTHWJ

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### News

# MINELAB'S SDC 2300 IS COMING SOON!

MINELAB ANNOUNCES A NEW MID-RANGE GOLD DETECTOR!



#### Key features:

- Compact 16 inch (40.64cm)
- Waterproof 10ft (3m)
- Rugged and assembly free
- · High performance MPF technology
- Audio and Visual Target Response
- Easy to use
- · Intuitive icon user interface
- C –Cell Batteries Included
- · Quick and Easy patch hunting

The SDC 2300 gold detector performance is above the X-TERRA 705 and Eureka Gold and below the GPX Series. This detector offers an entry to Minelab's Pulse Induction (PI) gold technology. It offers greater versatility in rugged terrains and for recovery of underwater gold because of its waterproof capability, ergonomic design and telescopic multi-position shaft. Price: TBA . More details will be made public on Jan 31st

#### Code Red Fire Days Notice

In the event that a Code Red fire rating is declared for the fire district that the camp is held, for any of the official camp days, then the camp will be cancelled. For the Fire District, consult the Club Map.



During Code Red days, no one is permitted to enter State Parks and Forests. Camps may also be cancelled during other periods of severe weather.

# Garrett ATX Extreme Pulse Induction Detector





The Garrett ATX is the ultimate multi-frequency detector for all terrains and extreme conditions (highly mineralized ground, saltwater, etc.). It features advanced pulse induction technology, a durable design that meets military specifications, and a new DD coil design for extreme and uniform sensitivity - from tiny gold pieces to larger gold nuggets. The ATX is ideal for gold prospecting, relic hunting in highly mineralized soils, shallow water coin and jewellery hunting, and even for industrial applications. The ATX includes Motion and Non-Motion Modes, Advanced Ground Balance, LED signal strength indicator, Iron Check, and much more.

The ATX provides maximum detection on all targets at the same time. No need to switch modes to enhance detection of one target while degrading another.

The ATX can be operated with its stem fully extended, fully collapsed, or anywhere in between.

The Searchcoil can also be locked in 90° orientations to scan embankments or walls.

#### ATX KEY FEATURES

Maximum Detection on all targets at the same time. No need to switch modes to enhance detection of one target while degrading another.

Advanced Ground Balance: has wide range to ground balance from heavily mineralized ground (ironstone) to saltwater without switching to special modes.

Exclusive Design DD Searchcoil: enhances detection of small items without having to slow down the scanning speed of the coil.

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Fully Collapsible: the ATX can be operated with its stem fully extended, fully collapsed, or anywhere in between. Quick Iron Check feature and adjustable Discrimination

Price \$3,399.00.

More details at http://www.garrettaustralia.com.au/atx-extreme-pulse-induction/

Available from February 2014.

### **Recent Gold Finds**

This is an update on the recently found specimen by a member weighing around 24 ounces with an estimated SG test of 9 ounces of gold.

It has now come out of the hydrofluoric acid and may now be revealed to members in all of its golden glory.

Here is the photo before it went into the acid.



And here is the photo afterwards.



SG test of 255 grams of gold.



Three nuggets with a total weight of 105 grams found over Xmas by a member on crown land.

### Xmas Break Up Report

A joyous day was had by 60 seekers on their last social day of 2013. Although rain was predicted, the gods shined on us by keeping it in check. Many events were organised to give us an interesting day. The usual Bluey Crawford token hunt for 200 tokens was won by Bluey's old mate Thomas M by finding 26, a great effort. The lucky \$50 key was shown the light by Lindsay.

A new event was conducted this year called "Stake Your Claim". A roughly 18 meter square area was set out with tape, and marked out in 1 meter divisions with letters down one side and numbers down the other. Participants purchased 4 pegs with 4 meter of ribbon and proceeded into the square and marked out their claim by randomly placing the pegs in a 4 sided shape enclosed by the ribbon. The winners were determined by drawing numbers and letters and then by pulling 2 ropes across from different directions on these grids, if they crossed on your claim, you win. Three lucky winners received gold nuggets (what else do you get on a lucky claim). The 2 gm nugget was won by Peter R, the 1gm Robert S and the 0.5 gm by Robyn H. A special thanks goes to Francois for resourcing the special pins and tapes and organising this very successful event.



Lis & John Looking for keys or tokens.

Continued next page



74 gram nugget found by John B. recently.

### More Xmas Break up Photos

(continued from previous page)

Three great hampers including hams were won by Peter G, Sue C and Robyn H. To round off the events, many door prizes also won. Another special thanks goes to Val for organising the above prizes. The day was a great success, giving members a chance to socialise and have a bit of fun as well which also proved to be profitable for some.



Stake Your Claim participants.



Stake Your Claim winners Robyn, Peter & Rob.



Hamper winners Robyn and Sue.

### News

# FireReady app upgraded just weeks after release

By Lucy Batterby From The Age 08/01/2013

Victoria's FireReady app will be updated just weeks after being re-released because it did not work on some smartphones, watch zones were too large for urban areas, and confusion arose about a misleading "registration failed" message.

Fire Services Commissioner Craig Lapsley said the app was working as expected, but warned it was not a "silver bullet" and should be used along with warnings and bushfire information from radio, television, websites, hotlines, sirens and general awareness.

Meanwhile, mobile coverage around regional Victoria has improved in the past year and should provide better coverage in the event of bushfires, according to network owners, including delivering emergency alert texts.

The new FireReady app has been downloaded about 116,000 times since it was relaunched by the FSC on December 16 to replace an app made by the Country Fire Authority that crashed if too many people were using it.

The new app works only on recent Apple and Android software, which meant people who had not updated their smartphone's software were unable to use it. It was not available for Microsoft or Blackberry smartphones.

Mr Lapsley said it was frustrating to discover the new app gave a misleading "registration failed" message if users did not also activate "push notifications", which allow the app to send warnings. This message confused and deterred many people, Mr Lapsley said.

A serious compatibility problem with HTC One phones has been resolved after the Commission released an updated Android version on Friday.

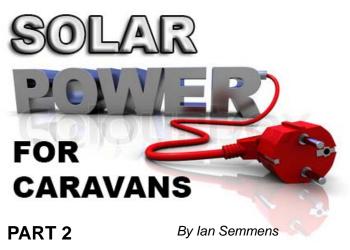
Victorians should also receive warnings on mobile and fixed phones if they were in danger through the Emergency Alert System.

Optus' network has been fully integrated into the warning system and it has built new mobile sites in towns such as Glenmaggie, Longford and Wahgunya, a spokesman said. Vodafone's network spread was now available in 70 more regional Victorian towns, including Leongatha, Inglewood, Port Campbell, Foster and Yarram, according to a company spokeswoman. And Telstra's network now covered 81 per cent of Victoria's landmass, a spokesman said.

Read more:

http://www.smh.com.au/digital-life/smartphone-apps/fireready-app-upgraded-just-weeks-after-release-20140108-30gl9.html#ixzz2qEA2Cqvl





Equipment: (continued from last issue)

Covered in this part will be:

- Types of controller,
- Types of battery
- Types of connectors, and cable sizes.

#### Controller:

A Controller (sometimes known as a Regulator) is placed between the panel and the battery and has smart electronics in it which can control and vary the amount of charge and voltage going into the battery. It can monitor the performance of the panel, the battery and the current charge or discharge condition and give the user information on how the solar system is performing.

**Basic controller:** Simple cheap type. Low current capacity. No or little monitoring. Not normally available in multi stage charging. \$20-100.00.

Advanced controller: This has 3 to 5 stages of charging. You can specify battery type and it may accept a remote LCD display screen to give more detailed information. It has monitoring of many parameters such as open circuit voltage, input current from panel, input current to battery and current load current. They often also have low voltage cut out, prevent reverse current flow and have temperature compensation so that your battery is charged at the correct rate. \$150-350.00.



The **EP Solar** MPPT 30 Amp Controller installed under the seat and as close as possible to the battery. It is connected to a 120AH & 55AH battery via a changeover switch.

#### Types of advanced controllers:

- Pulse Width Modulation (PWM). These gradually reduce the power to the battery and when it is fully charged it reverts to a Float Charge to maintain the battery.
- 2. Maximum Power Point Tracking (MPPT). This has similar functions to the PWM but is also able to convert excess voltage into amperage and thus "boost" the solar charge current going into the battery by 10-20%. This type is the best, however they are more expensive and in very hot temperatures it loses this advantage and performs on par with the standard type.

#### **Power storage battery:**

So far as performance and price the lead acid battery is clearly the preferred option in a battery compared to other alternative such as Li-ion Batteries.

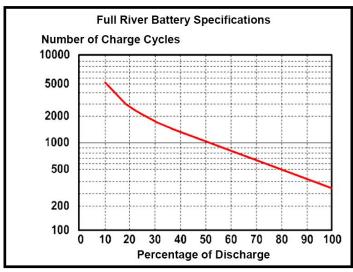
You will need to get a deep cycle battery which is constructed to allow low discharge of current to the device over a long period. It will allow the battery to go to a lower state of discharge and will recover better than a starting battery. It will also be more expensive as it has thicker lead plates.

#### Types of Lead Acid Batteries

- i) Flooded cell This is the typically the vehicle starting battery. The acid is stored as a liquid and requires regular maintenance although there are some types claim that they are maintenance free. The vehicle starting battery type is not suitable for solar power storage as it is constructed to deliver a high burst of current for a very short period of time. There are flooded cell deep cycle batteries available but these are normally large and used in a fixed location.
- ii) Gel cell Maintenance free. The acid is stored as a gel. Good performance.
- iii) AGM Maintenance free. The acid is stored in absorbed glass matting between the lead plates. This battery is dearer but usually lasts longer and is the preferred choice for most campers. They also can be charged at a slightly higher rate than the other types of lead batteries and will potentially last longer.

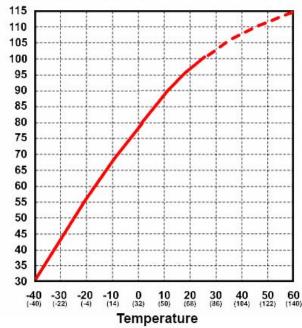
#### Tips:

a) Cyclic Service Life: There are a number of factors that will affect the length of cyclic service of a battery. The most significant are ambient operating temperature, discharge rate, depth of discharge, and the manner in which the battery is recharged. Generally speaking, the most important factor is depth of discharge. In the interest of long battery life, under normal conditions do not discharge any deep cycle battery more than 30% of the AH capacity and only on an occasional basis, you could discharge to 50%. The more and deeper the discharges that you have, the shorter the battery life will be.



The deeper the discharge, the less charges that the battery will take and the battery cyclic life will be shorter.

#### Percentage of Capacity



- b) In colder temperatures less power will be available from the battery but more power will be able to be put into the battery. In hot temperatures there will be more capacity available but the battery will not absorb as much charge.
- c) Different battery types have different requirements for charging so make sure that your get a controller that can charge your type of battery. If you get an AGM battery then ensure that you controller has an AGM charge setting.
- d) Check out the published charts and weights of the battery on the company's website. This will indicate recharging cycles that you will get depending on the depth of discharge.
- e) A battery of the same amp hours that weighs more than another brand may be better (and probably more expensive) because they are using thicker lead plates which will recover quicker and last longer.

- f) A new battery will only reach its maximum capacity on about the fifth charge.
- g) When you charge up a battery with a charger leave it for at least 6 hours to let the charge stabilise so then you can measure the volts and get an accurate reading. Measure the voltage of a battery under load.
- h) Batteries loose charge over time, that is, they selfdischarge.

Self-discharge at 25°C over time. Based on information supplied by Full River Batteries.

Capacity after 3 month storage	91%
Capacity after 6 month storage	84%
Capacity after 12 month storage	64%

#### Wiring:

Make sure that the wiring you use can handle the current that you are drawing and it must be protected by fuses or circuit breakers.

To calculate the size of the required cable in square millimetres (**NOT** the diameter of the conductor or the insulator), first determine the amps that the device draws, then decide on the acceptable voltage drop (Vd). I recommend 0.15 Vd and this give a factor of 0.0164.

Then measure the length of the cable run, then double this figure to get the total conductor length (the send and return path) as all caravan wiring should be twin core cable, not chassis earth return.

Then multiply Amps x Vd x Length = size of cable in square millimetres (mm²). This formula applies to copper cable at  $25^{\circ}$ C. The voltage drop will increases as the wire temperature increases (resistance increases) at approximately 0.4% per °C. If it does not come out as an exact cable size then be safe and get the next biggest size available. This formula is available is available from me as a Excel table to make it easy to determine the conductor size.

For Example: A TV that draws 2 amps (24 watts) that is 8 meters from the power source with a Vd of 0.15 would give a size of 3.5 mm<sup>2</sup>. As the next size up is 4mm<sup>2</sup> we would use that cable size.

Note: cable sold at auto shops is usually marked and sold on the diameter of the insulator, not the conductor. Different manufactures have different interpretations on how thick the insulator needs to be, and plastic is a lot cheaper than copper, you end up with different thicknesses of cable for the same sized conductor. So don't just judge it by the outer diameter only. If you look on the label of the cable drum it will often has the square millimetre (mm²) size. This is what you need to go by. Also be aware that the stated maximum amp load on the label is the point at which the cable will fail. The "safe" maximum load is less than this.

Next Issue: Part Three

- Installation Tips and Practical Experience.

### Jan. Outing: Chute

#### Friday 24th to Monday 27th January

### Feb. Outing: Clydesdale

Friday 14th to Monday 17th Feb.

**Fire District:** South West **EMERGENCY INFO:** Call 000. Police: Beaufort, Ph. 5349 2101

Hospital: Havelock St., Beaufort, Ph. 5349 2001

Emergency Info: Call 000. Fire District: Central

Note: Fire Risk Period - No camp fires without committee approval.

THIS IS A BUSH CAMP. BYO water, power and toilet, strictly observe park and fire regulations. Dogs must be on leash and under constant supervision.

No unattended fires.

Note: Fire Risk Period - No camp fires without committee approval.

THIS IS A BUSH CAMP. BYO water, power and toilet, strictly observe park and fire regulations. Dogs must be on leash and under constant supervision. FILL IN ALL HOLES, take your rubbish home and carry a valid MINERS RIGHT at all times.

Under current Government requirements fossickers should be trained in first aid; they should carry water, a mobile phone, a list of contacts in case of emergency and a basic first aid kit; any incident or injury should be reported to a Committee Member ASAP.



From François & Francine
To all the persons who expressed their concern about
François' accident.
The operation was successful, and everything is almost back to normal.....
Thank you again
François and Francine



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