

EXPOSURE



My Melbourne AVs
President's Report
EDI Set Subject Images
Diffraction and Photography
Competition Results

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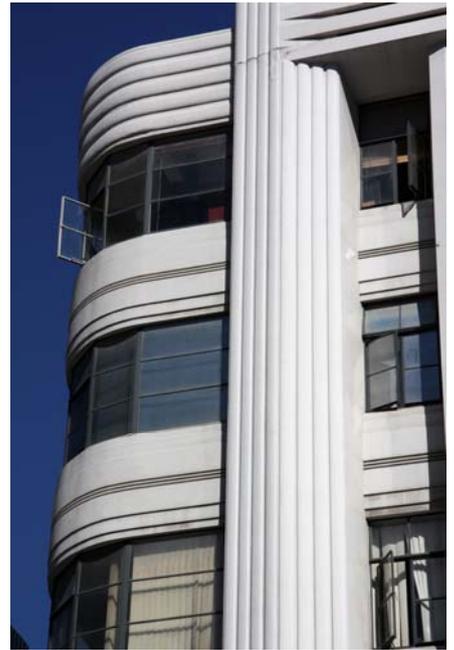
My Melbourne AVs

Phil Marley

During 2005, I presented some introductory talks to the club's Digital Group on how to make a digital audiovisual show using the ProShow software package. At the same time, I challenged members of the group to make an audiovisual of their own.

the topic because, at the time, I found that I had no photos of Melbourne in my collection in spite of having lived here since 1983.

To get the Digital Group on its way, I made a short, simple AV about Hobson's Bay in Williamstown to



Art Deco Melbourne - 2010

set to a single piece of piano music by Erik Satie.

The show I went on to make for the 'My Melbourne' AV night was '101 Melbourne Icons' - still one of my favourite AVs. I involved lots of friends in planning the show, helping to identify iconic Melbourne things I should include. My criteria were quite strict: each item needed to be unique to Melbourne and to be instantly identifiable as 'Melbourne' to someone from Melbourne (even if non-Melburnians did not know it). I tested



101 Melbourne Icons - 2005

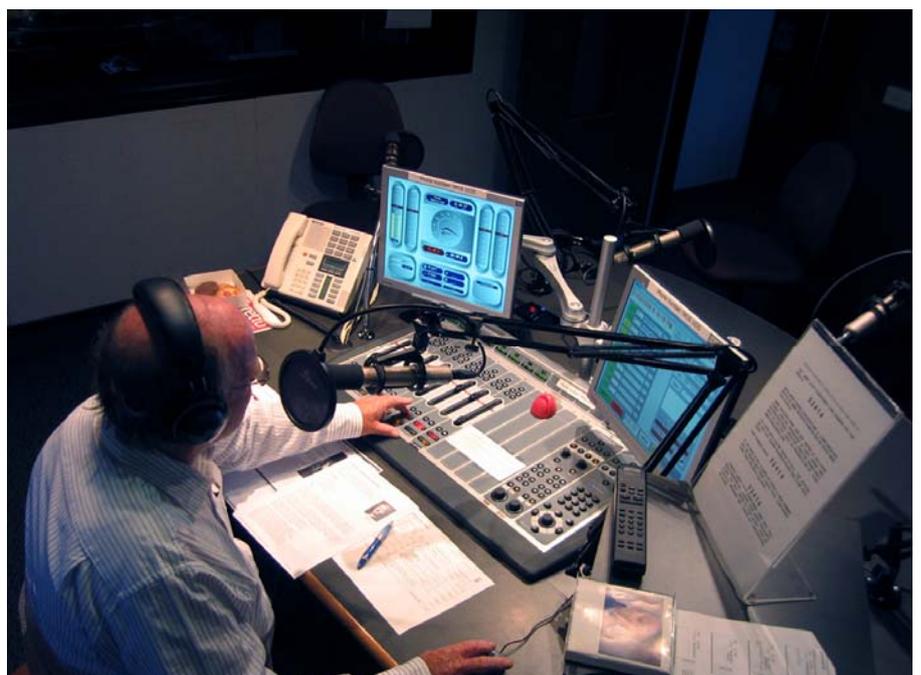
My aim was for the Digital Group to present a Thursday evening of entertainment for all club members at the end of the year, to show the sorts of thing the Digital Group got up to at their monthly Monday meetings.

To provide a linking theme to the AVs to be presented, I proposed that everyone made their shows on the theme of 'My Melbourne'. I suggested

illustrate the sort of AV show they could easily make without having to master the full technical capabilities of ProShow. I took the photos for it in one afternoon on my Canon PowerShot S60 pocket digital camera and made the show in about an hour,



Southbank protest - 2006



103.5 - 2008



Hobson's Bay - 2005



Melbourne Open House - 2010

everyone's suggestions with others to see they passed the test.

We ended up with 11 great 'My Melbourne' AVs all on different views of Melbourne life in what was to become an annual club calendar event for many years. And of course we now have a dedicated monthly AV Group to enhance our skills and satisfy the interest of members in AVs.

Since 2005, 'My Melbourne' has been a recurrent theme for my own audiovisuals. I now have eleven shows which present different parts or aspects of this fantastic city, with topics from an evening spent in city radio station, to Australia Day at Government House, to street art, to a community protest about restrictions on photography.

One of my long-time photographic interests is architecture. It featured

strongly in the images of my '101 Melbourne Icons' show and I have enjoyed architectural AVs by other

I have participated in the Melbourne Open House weekends over the last three years when dozens of city buildings open their doors free to the public. In 2010 this coincided with an opportunity to borrow a Canon L-series 24-104mm lens to go on my beginner's 450D - the result was some of the sharpest images with the best contrast I have ever taken - and another AV about Melbourne buildings (and also a big hole in my bank account, since I then went and bought the lens!). In 2010 I took a guided tour of art deco buildings around the city led for the CAE by Robin Gow (author of *Melbourne Art Deco*). Another AV.

A number of my non-architectural Melbourne AVs have also resulted from a single day's photography. Many club members will remember the protest held down at Southgate in July 2006 over concerns about increasing restrictions on where photographers can take photos. My shots of the protest became another AV.

A friend of mine, Bruce Livett, was a programmer and presenter for 3MBS 103.5 FM community radio and in 2008 I helped him program one of his evening classical concert programs. As preparation, I spent an evening with him in the 3MBS studios at the Abbotsford Convent during one of his broadcasts. Another AV was the result.

With the exceptions of the Hobson's Bay and Melbourne Icons AVs, I have usually not planned AVs before I take my photos of Melbourne - deciding after the event to put the



Australia Day - 2007

club members such as Ray Huntley who share this interest. A number of my other shows have focussed on Melbourne architecture and have been the result of a single day's shooting.

On Australia Day 2007, I took the opportunity to visit Government House when it was open to the public (now an annual opportunity, but not so in the past) and ended up making a show just about Government House. (Indeed I sent a copy of the show to the staff at Government House as a thank you for their help organising a function I was coordinating there in Feb 2007).



Pretty Woman - 2010



Year of the Cat - 2011

photos into an AV to make them easier to show friends. This was the case with some graffiti AVs I made recently.

Having become interested in street art as part of Melbourne streetscapes in mid -2010, I realised I was accumulating many hundreds (actually several thousand!) of graffiti photos with no practical way of sharing them or showing them (except the calendars I have made for the last couple of years). Also, I desperately needed to put a stop to taking graffiti photos (I was taking nothing else for over a year).

Creating some shows was one way to say 'I don't need any more graffiti shots'. So I decided to put a line in the sand by making four AVs with the images I already had - *Pretty Woman* and *My Guy* collected street art depictions of women and men, and *Year of the Cat* featured some of the 200 essentially identical spray-painted outlines of a cat by street artist Lush that I had found across 12 suburbs while seeking out street art (photographically probably the most boring AV I have ever made). I still haven't made the fourth street art AV.



The Mall - 2011

My latest AV, 'The Mall', has been quite different to my 2006-2010 shows: it was planned.

Indeed it was more carefully planned than any other show I have made - almost to the level of a storyboard, which John Spring has always advocated.

I had been thinking about the Bourke Street Mall as

a topic for an AV for some time but I had been stuck on what music to set the pictures to. Then I remembered a suggestion from Maggie Smith some years ago about using street buskers' music in Prague for one of her shows and I decided to use music from one of the flamenco guitarists who plays regularly in the Mall. This released my mental block.

Having chosen the music track, I then carefully planned the number of images that would fit with the music, and the number of photographic themes I could fit into the phrasing of the music. I then spent three afternoons in the Mall capturing images of pre-determined subjects to fit into my plan. When programming the show in ProShow, I added another

little twist - finding particular images to end one theme and link it visually to the next. On watching the show, this extra visual connectivity between the different sets of images only becomes apparent on multiple viewings, which I like.

As a photographer, the soundtrack for my AVs is often a stumbling point and I find I need to have a particular piece of music in mind before I can visualise an AV. This was particularly central to the AV I made in 2006 for our Digital Group showing on the theme of 'Emotions', where I knew immediately I would use Melanie Safka's song 'the saddest thing' and then designed my show around this. All the photos were then quickly, captured down by the Yarra at Southbank or Docklands or at the Melbourne cemetery.

So what's next in my Melbourne AVs? Well, there is an endless list of subjects to choose from. A couple of weeks ago I participated in the Melbourne City Romp - a fundraiser for the Burnet Institute which conducts medical research on HIV, tuberculosis



My Guy - 2011

and malaria - and ran into David Purdue who was one of the official photographers. It was a great photographic spectacle and a great AV subject, so one I will think of for next year. The Melbourne calendar is full of such events - think of Round the Bay in a Day, city fun-runs, Moomba, St Kilda festival and more. I want to do an AV on my local suburb. I also want to choose a local park and do an AV just about that park. I have recently got into bird photography and found the wetlands in Royal Park on Oak Street are a brilliant location for a beginner nature photographer (I suggest the Tuesday morning outings group put it on their list) - I can feel a Royal Park AV in the making. Melbourne trams. Sporting events. The Yarra. The list goes on.

I am sure I will continue making AVs about 'My Melbourne' for many years yet.

President's Note

Jo Beilby

Welcome back, everyone!
I hope you have been happily hunting your photographic prey.

Regardless of where you are now on your path to photographic mastery, do you remember the first time you took a photograph? Were you allowed to press the shutter button? Focus the camera? Frame the shot? Did your parents let you hold the camera or was it 'very heavy, very expensive' and 'not a toy for children,' as was our Minolta SRT 303? Whether in the 1970s, like me, or another decade, it would have been a very different experience to that of the young people of today.

At the recently completed pilot MCC Photography for Kids course, it was fascinating to see children as young as five years old have their first meaningful interactions with a camera. Armed with their own highly cost effective and virtually indestructible pocket digital cameras, they wielded them like pros, without fear or favour.

They were captivated. They were highly experimental and some even read the technical manuals! But they were like all of us, at the mercy of the machine, and they needed to learn the basics too.

Sixteen children enjoyed a thoroughly comprehensive ten week course that has culminated in a print exhibition at the Club. Children and their families and friends enjoyed a most successful day with presentations and awards from our independent judge. Next term, Southern Cross Grammar has asked the Club to continue teaching and we are looking forward to extending our basic skills into genre work.

The children were asked to submit their thoughts about the course and what has come to be known as 'Camera Club.' It was a pleasure to teach children with such insight and creativity in their first steps towards photography enjoyment and mastery.

Happing hunting!

MAX

Hello, My name is Max.

I am eight years old. I enjoy photography because photos have a story and the story is a nice thing to look back to and it is fun. I think I will be a very good photographer when I get older.

SOPHIA

Hi, My name is Sophia and I am nine years old. I like taking photos of living things. I want to be good at everything. I like the picture of me on the monkey bars.

CHARLIE

Hi, My name is Charlotte, but I like to be called Charlie. I am five years old and in grade prep. I like learning how to work the camera and take photos of the playground. I would like to photograph pets in the future. I mostly enjoyed photographing colour this term.

MANSIMRAN

Hello everyone, My name is Mansimran. I am nine years old. I am in year five at Southern Cross Grammar. I like to take photos of nature. In the future, I hope to use the skills I have learnt for better photography. I have enjoyed learning new things and taking photos. Camera Club has been a wonderful experience.

Thank you.

OLIVER

Hi, My name is Oliver. I am ten years old. I am in grade five at Southern Cross Grammar. I learned a lot of information at photography. I learned about focus, light, and exposure. Now my photos are much better because they are more focused and clear. I like taking photos of lots of different subjects like textures and landscapes. I would like to do more photography next term so I can take great photos in the future.

HADUR

Hello everybody, My name is Hadur. I am nine years old. I like to take photos of things that live in this world. For example: people, plants, animals and lots more. I will become a photographer in the future. I most enjoy clicking in a veggie-patch.

Thank you.

AEDEN

Hi, My name is Aeden. I am twelve. I enjoyed taking photos with my friends and learning all the uplifting moments of photography. In the future, I would either enjoy being a photographer or The Stig. I enjoy photographing abstract images and using depth of field in my photography.

OSCAR

Hi, My name is Oscar and I am six years old. I like learning how to take photos. I like taking photos that mean something to me and that I can tell the truth with. I enjoyed learning about light and how to show people things they may not have seen before. I'm looking forward to being a good photographer and learning something new.

The Melbourne Camera Club

ACN 004 344 549 ABN 79 004 344 549

CLUB CONTACTS

Clubrooms

Corner of Ferrars and Dorcas Streets,
South Melbourne
Phone 9696 5445
PO Box 1180, Sth Melbourne 3205
www.melbournephoto.org.au

President

Jo Beilby

mcc-president@melbournephoto.org.au

Secretary

Tim Kohlman

mcc-secretary@melbournephoto.org.au

General Questions

mcc-info@melbournephoto.org.au

Treasurer

Ian Bock

mcc-treasurer@melbournephoto.org.au

Portrait Group

David Purdue and John van Hirsell

mcc-portrait@melbournephoto.org.au

Studio Bookings Officer

David Gilliver

mcc-studio@melbournephoto.org.au

Darkroom Co-ordinator and Booking Officer

Selby Markham

mcc-darkroom@melbournephoto.org.au

Introduction Photography Course

Darren Bennett

mcc-courses@melbournephoto.org.au

Traditional Darkroom

Printmakers Group

Selby Markham & Tim Kohlman

mcc-blackandwhite@melbournephoto.org.au

Digital Group

Kevin Rowley

mcc-digital@melbournephoto.org.au

Print Competition Steward

Vacant

mcc-compcommittee@melbournephoto.org.au

EDI Competition Steward

David Purdue

mcc-edi-comp@melbournephoto.org.au

Audio Visual Group

John Spring

audiovisualgroup@melbournephoto.org.au

International Competitions

Maggie Smith

Photo Discussion Group

Simon Galbally

mcc-photodiscuss@melbournephoto.org.au

Librarian

Scott Heim

mcc-library@melbournephoto.org.au

MCC Website

Manager - Patrick Jackson

mcc-webmaster@melbournephoto.org.au

Website Content - Kim Thorogood

mcc-webcontent@melbournephoto.org.au

Website Photos - David Purdue

mcc-photos@melbournephoto.org.au

February EDI Set Subject Entries - Architecture



Sheryl Opie *Malthouse Theatre and Tunnel Exhaust*



Robert Fairweather *Untitled*



Nicole Andrews *Untitled*



Ray Huntley *Architectural Symmetry*



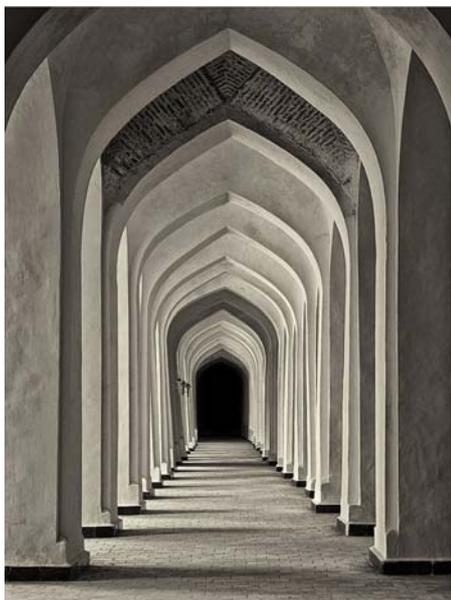
Marg Huxtable *Look Through AnyWindow*



Barb Butler *Untitled*



Annette James *Seattle Library*



Peter Walton *Silk Road*



Ian Bock *Untitled*



Charles Kosina *Perth Bell Tower*

March EDI Set Subject Entries - Cups



Annette Donald *Splash Splash*



David Purdue *B-cups*



Frances Egan *Untitled*



Charles Kosina *Cappuccino x 2*



Ian Bock *Untitled*



Marg Huxtable *Double Ds*



Robert Fairweather *Untitled*

Diffraction and Photography

Charles Kosina

One of the first things we learn in *Photography 101* is how to achieve high “depth of field”. That is, objects close by and at a distance should be in focus. And the way to achieve a good depth of field is to decrease the aperture of the lens.

I won't go into why this is so, it's all to do with “the circle of confusion” getting smaller as the aperture decreases. If you want to revise all this in detail go to:

www.cambridgeincolour.com/tutorials/depth-of-field.htm

As the aperture gets smaller, the amount of light reaching the sensor also decreases so that longer exposure times are needed. This would imply that to get almost infinite depth of field, an aperture the size of a tiny pinhole would do the trick with a very long exposure time. No such luck!

As you decrease the aperture something else happens, and that is diffraction. What is diffraction? Diffraction is a phenomenon that occurs in all waves be they sound waves, water waves or electromagnetic waves, including light. Quoting from Wikipedia,

“In classical physics, the diffraction phenomenon is described as the apparent bending of waves around small obstacles and the spreading out of waves past small openings”.

What this means is that when light travels through our lens aperture, it does not continue in a straight line, but

Fig 1. Large Aperture, e.g. f/2.8

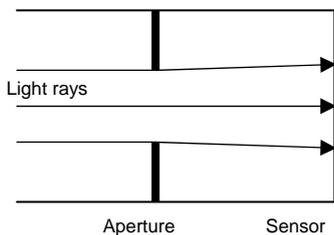
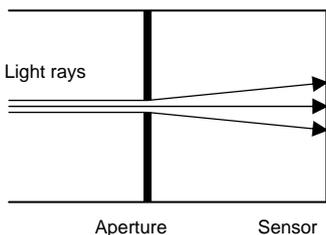


Fig 2. Small Aperture, e.g. f/22



diverges. And the divergence gets greater as the aperture size decreases.

In Fig. 1 the light rays passing through a large aperture remain mostly parallel, with only a slight divergence at the edges. (The effect is somewhat exaggerated in the diagram.)

Now in the small aperture of Fig.2 we have a greater divergence of the light rays.

The divergent rays travel slightly different distances. This results in interference which produces a diffraction pattern with peak light intensities where the amplitude of the light waves add, and less light where they cancel out. The interference pattern produced by the light rays, creates what is known as an “Airy Pattern” named after George Biddell Airy who investigated the phenomenon in 1834.

So if you have a uniformly illuminated circular aperture there will be a bright disc known as the “Airy Disc” surrounded by a number of

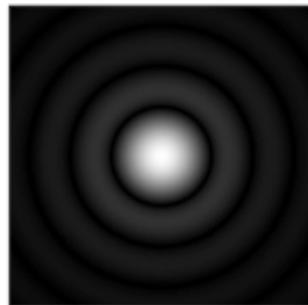


Fig 3.

Computer-generated image of an Airy disk. The gray scale intensities have been adjusted to enhance the brightness of the outer rings of the Airy pattern. (From Wikipedia article)

concentric bright rings. The brightness of these rings drops off rapidly as the diameter increases.

The mathematics of this is quite complex, and I don't wish to bring in lots of complicated equations into this article. Anyone who is interested, can find more detailed explanations of this on the Internet such as:

en.wikipedia.org/wiki/Airy_disk

and

www.cambridgeincolour.com/tutorials/diffraction-photography.htm

The latter of these has an interactive demonstration of how the aperture and pixel size will affect the size of the Airy disc.

What this means is that a spot of light that should cover only one pixel

on our sensor will spread out over adjacent pixels as the aperture is reduced in size. This results in an effective reduction of the image resolution because of the overlap of light from adjacent pixels.

We say that the image becomes “diffraction limited” when this overlap of the Airy discs starts to reduce the resolution or sharpness of the image.

So in practical terms, what are the limits to which we can reduce the aperture without diffraction blurring the image? The main factor is the size of the pixel.

Let's take two cameras, both with the same resolution, say 12 Megapixels. One camera has a “full frame” sensor, that is, the size of the traditional 35 mm film, and the other camera is a “compact” one with a sensor maybe one tenth the size of a full frame. The linear dimension of each pixel in the compact camera will be one tenth of that in the full frame sensor. So if we have an Airy disc the size of a pixel in a full frame camera, it will not be a problem, but the same size Airy disc will cover a large number of pixels in the compact camera.

Similarly, if we have two cameras with the same size sensor, but one camera has a greater pixel count, and hence smaller pixels, it will become diffraction limited at a larger aperture than the camera with a smaller pixel count.

This is, of necessity, a simplified explanation. I haven't gone into the structure of the sensors and how individual pixels for each primary colour are arranged. This affects the effective size of pixels and will determine at what point the camera becomes diffraction limited.

Use the calculator provided in the second link in the previous column to determine where your camera becomes diffraction limited. With a full frame sensor, this will be somewhere between f/16 and f/22, whereas with a compact camera, it may well be f/5.6 or wider.

This does not mean that you should not use smaller apertures. The effect is not sudden but will result in a gradual loss of sharpness as you wind the f stop to a higher number.

So how can we get a much higher depth of field? A recent approach is “focus stacking” where we take a number of different photos focusing the lens at different distances, and then use a clever computer program to combine them using just the sharp parts of each image.

But that's another story!

Print Exhibition

by David Oldfield and Richard White

Last year David Oldfield donated his high country huts images used to obtain his Fellowship (FRPS) at the Royal Photographic Society. These internal views of historic huts have taken David more than fifty years of hiking and photographing to obtain.

The unusual feature of these images is that they are taken inside the huts. This set of 20 historic internal images has now been supplemented by 20 historic external views of the huts.

Terry Lane visited the club to preview the exhibition on the 26th of March and it will be publicized in an *Age Green Guide* article.

The exhibition will be held from noon to 5pm Saturday and Sunday 21st and 22nd of April.

Photos by John Spring.



Terry Lane interviewing David and Richard



Terry Lane photographing David Oldfield

Bendigo Camera Club

Easter Photo Exhibition

Twenty four MCC members contributed 60 images to the exhibition. The exhibition was reportedly well attended. There will be a full report by Jim Weatherill in the next issue of *Exposure*.



Editors' Note

Thanks to all who sent in their images from the EDI Set Subjects for February and March. And thanks also go to John Spring for contributing images on this page, and Bernadette Wilson for extracting the competition results from our web site and formatting them into neat tables on page 10. This is always a very tedious task!

The May-June issue deadline is the 1st June. Have you interesting photos to share, or have you been to some exotic destination and wish to share your experiences? We would love your contributions!

Phil and Charles



Adrian Smith had a big task ahead of him judging 105 prints in the April competition. There was an excellent attendance with about 60 members and guests.
photo by Charles Kosina using Samsung Galaxy phone.

Monthly Competition Scores to March

A Grade Open Prints			
	Feb	Mar	Total
Annette James	ech	eep	17
C Habisreuginger	eep	eeh	15
Ray Huntley	eec	eec	10
Margaret Huxtable	eec	eec	10
Ray Farrugia	eee	ecc	10
Gary Richardson	eec	eee	8
Leif Andersen	eee	ec	7
Ian Bock	eee	eee	6
Mal McKay	eee	eee	6
Judi Mowlem	eee	eee	6
John Spring	eee	eee	6
John Van Hirsell	eec		5
Darren Bennett	eee		3
Jim Weatherill	eee		3

B Grade Open Prints			
	Feb	Mar	Total
John Mallett	ehh	eeh	18
Jane Clancy	eee	ecp	13
Greg Hotson	eee	ech	12
Martin Clancy	eec	eec	10
R Fairweather	eec	eec	10
Frances Egan	eec	eec	10
John Parkinson	eec	eec	10
Gary Leete	eec	eee	8
Shelly Black	eee	eec	8
Greg Aumann	eee	eee	6
Jim Odonnell	eee	eee	6
Jo Beilby	eee		3
Ken Bretherton		eee	3
Simon Beaven	ee		2
Shane Booth	ee		2
Robert Norman	ee		2
Ruben Glass		e	1

Set Subject Prints			
	Feb	Mar	Total
Jo Beilby	p		6
Gary Richardson	e	h	6
Bubbles Segall	h		5
Shelly Black	c	e	4
Marg Huxtable	c	e	4
John Spring	c	e	4
Greg Aumann	e	c	4
Jim O'Donnell	e	c	4
Jane Clancy	e	e	2
Frances Egan	e	e	2
R Fairweather	e	e	2
Gail Morgan	e	e	2
Judi Mowlem	e	e	2
Ken Warburton	e	e	2
Simon Beaven	e		1
Darren Bennet	e		1
Ian Bock	e		1
Ken Bretherton	e		1
Martin Clancy	e		1
Ray Farrugia	e		1
C Habisreutinger	e		1
Ray Huntley	e		1
Annette James	e		1
Robert Norman	e		1
John Parkinson	e		1
John Van Hirsell	e		1
Jim Weatherill	e		1
Rebecca Claire		e	1

A Grade Open EDI			
	Feb	Mar	Total
David Gilliver	eec	hhc	18
Stephen Spencer	eeh	cce	14
Ray Huntley	ece	cee	10
Marg Huxtable	cee	cee	10
David Purdue	cee	cee	10
Simon Galbally	eee	cce	10
Peter Walton	ech		9
Leif Andersen	ece	eee	8
John Meir	eec	eee	8
Nicole Andrews	eee	cee	8
Ian Bock	eee	cee	8
Annette James	eee	cee	8
Gary Richardson	eee	cee	8
Rob Featonby	cec		7
Rachel Ferris	eee	eee	6
Charles Kosina	eee	eee	6
Phil Marley	eee	eee	6
John Spring	eee	eee	6
Barbara Butler	eee		3
Jim Weatherill	eee		3

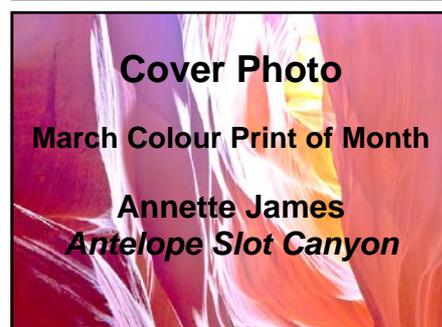
B Grade Open EDI			
	Feb	Mar	Total
Martin Clancy	chh	cce	20
Jane Clancy	hhe	hee	18
Alan Donald	cpe	cee	15
Kei Ho	hee	cee	12
Joshua Reuveni	hee	cee	12
Annette Donald	eee	cce	10
Kelvin Rowley	cee	cee	10
Rebecca Claire		hce	9
Mal McKay	ccc		9
R Fairweather	cee	eee	8
Robert Norman	ch		8
Ken Warburton	eee	cee	8
Nino Xerri	eee	cee	8
Sue Block	hee		7
Greg Aumann	eee	eee	6
Lucien Tran		cee	5
Frances Egan	e	eee	4
Sheryl Opie	eee		3
Mark Warrender	eee		3
Simon Beaven	ee		2
Alan Hodges		e	1

Novice Open Prints			
	Feb	Mar	Total
Ken Warburton	ech	eec	14
Bubbles Segall	ecc	eeh	14
Kathryn Hocking		ecc	7
Lucien Tran		eeh	7
Gail Morgan	eee	eee	6
B-L Fairweather		eec	5
G Del-Castillo		c	3
Rebecca Claire		eee	3
Steve Graham		eee	3
Ron Dean		e	1
Andrew Gower		e	1

Set Subject EDI			
	Feb	Mar	Total
Jane Clancy	e	p	7
Frances Egan	h	e	6
Joshua Reuveni	h		5
Nicole Andrews	c	e	4
Ian Bock	e	c	4
Martin Clancy	e	c	4
Annette Donald	e	c	4
Marg Huxtable	c	e	4
Charles Kosina	c	e	4
David Purdue	e	c	4
Gary Richardson	c	e	4
Barbara Butler	c		3
Steve Graham	c		3
Annette James	c		3
Richard Smart	c		3
Greg Aumann	e	e	2
Alan Donald	e	e	2
R Fairweather	e	e	2
Kei Ho	e	e	2
John Meir	e	e	2
Kelvin Rowley	e	e	2
Stephen Spencer	e	e	2
John Spring	e	e	2
Ken Warburton	e	e	2
Simon Beaven	e		1
Sue Block	e		1
Rebecca Claire		e	1
Rob Featonby	e		1
Simon Galbally	e		1
David Gilliver	e		1
Ray Huntley	e		1
Mal McKay	e		1
Robert Norman	e		1
Sheryl Opie	e		1
Peter Walton	e		1
Mark Warrender	e		1
Jim Weatherill	e		1

Points Scoring System

Entry (no award)	e	1 point
Commended	c	3 points
Highly commended	h	5 points
Print/EDI of the Month	p	6 points
(5 for highly commended plus 1 extra)		





March EDI of the Month

Jane Clancy

Cup Reflections



March Mono Print of the Month

Jane Clancy

Agave



Feb Colour Print of Month Christian Habisreutinger *Tranquil*



Feb EDI of Month Alan Donald *Petals*