

PO Box 19
Churchill
3842



President:
5122 3137

Friends of Morwell National Park Inc.

Newsletter – January 2010

Website: <http://morwellnp.pangaean.net>
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Hello everyone and welcome to this month's newsletter. In park news we now have a local Ranger. Jenny joined us for the December activity and she will be a great help to the group. Jenny previously job was working for Wellington Shire looking after their promotion needs. She will enjoy the opportunity to get outside of the office and around the park. She is keen to learn from the Friends' group and there are many things she will be able to help us with.

The slashers have been out and about in the park making the park look a lot better and making it a lot safer for walkers. Having the grass slashed will reduce the fire risks within the park and for the local residences.

In the last month we have had a celebration dinner to thank Rob for his service towards the park. It was great to get together to thank Rob for the superb work he has done in the park and for all of the support he has given to the Friends group. It was a great night with many of the members of the Friends group (both old and new) able to thank Rob. Included in the group were three foundation members (Ken Harris, Wendy Steenberg and Tom Lawless) who have been involved with the National Park since its beginning. We will try to bring you some photos from the night in later newsletters.

Some wonderful gifts were presented to Rob by both Cathy and John. Cathy made a photo frame containing many images from the Park over the last twenty years. A number of different Friends' group members from over the past twenty years were displayed, along with Rob involved in friend's activities and some of special plants and animals of the park. John had turned a pen made of wattle from the park. It was a wonderful piece of workmanship.

This month the newsletter is the special Sugar Glider edition. In the December activity while checking the nesting boxes the group was greatly excited to find a Sugar Glider in one of the nesting boxes. It was great to see the boxes being used so soon after being installed. The photo in Cathy's December activity report was taken by Ken during the activity.

Ken returned later that night in an attempt to take more photos of the Sugar Glider. Ken set up as it was getting dark with his camera with a telephoto lens, flash set up on a tripod and a flashlight, when he suddenly saw a little face at the entrance to the nesting box, and got his first picture. (The photos Ken collected follow Cathy's December activity report.)

Friends of Morwell National Park Inc: PO Box 19, Churchill, 3842, <http://morwellnp.pangaean.net>.

President: Ken Harris, 51223137

Vice-President: Peter McDonald

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Treasurer: Wendy Steenberg

Publicity: Denis Sultana

Public Officer: Jane Sultana

Newsletter Editor: Darren Hodgson, 90 Tebb Terrace Junction Junction 3840, 51222108, dhodgson@wideband.net.au

Members: Mary Austin, Jack & Margaret Barker, Mike & Cathy Beamish, Eulalie Brewster, Reg Felmingham, Tom Lawless, Peter & Wendy McDonald, John Pulis, Joan Sikkema, David Stickney, Laura Webber, Australian Plant Society (Latrobe Valley).

Over the next half-hour it kept looking out, though occasionally disappeared inside, but never showed more than its head. Half an hour later there was a lot of noise of movement in the branches and suddenly the bark hanging just above the nest-box was rattled and there was a Sugar Glider on top of the box. Ken is certain the first one never came out of the box and that this one had just arrived from another tree. What confirmed for Ken that this was a second glider was that this one is darker around its eyes than the first one.

Ken has also written an article which follows up his concerns from the November Butterfly Orchid survey. This article is at the end of the newsletter.

Lastly to all have a happy new year and safe 2010.

December Activity report

Before we indulged in our Christmas lunch, we met at Junction Road so that we could walk into the park to check on the status of the new nesting boxes. We met in the carpark at 10am, where we met Jenny, our new ranger. Jenny had brought along an extension ladder and a new GPS, to assist in finding in some of the boxes.

Jenny drove the 4WD into the park with the ladder on the back and then Mike and Reg lugged the ladder around for the next two hours. The first few nesting boxes were quickly found and saw Ken climbing the ladder to check on what may or may not be in there.

We checked over half of the boxes during the two hours and found that some of them were completely empty, some had leaf litter in them and much to our surprise and delight, one had a very cute sugar glider in it. Ken was able to take a good picture, which is below.



As all the new boxes were the same size and had 2 inch holes in them, we decided that we would make some of the holes smaller. John very kindly made up the appropriate blocks of wood with one inch holes in them and

then Ken and John nailed them to the even numbered boxes that had nothing in them. We are hoping to encourage smaller creatures such as pardalotes and antechinus into some of the boxes.

Once we had finished at Junction Road we moved on to Kerry Road for our self catered Christmas lunch. Rob, Wendy, Ken's wife Fay, and Margaret with her daughter and grandson all joined us for lunch. Faye had brought along a very nice prawn coleslaw for everyone to share and Darren had made a vanilla slice. It was so good that Mike went back for seconds!

We all had a great time relaxing and catching up. We have decided to check out the remainder of the nesting boxes in January, once we have collected the blue gum seed.





January Activity

10.00am Sunday 17th January

The group will meet at the Junction Road entrance to undertake some seed collection and finish off the work on the nesting boxes along Billys Creek. The seed to be collected will be Blue Gum seed since some of the seed currently in storage is up to 10 or 20 years old. Newer seed should be more viable. Seed will be collected from the Reidy's road entrance to the park.

With the nesting boxes a bit over half were either checked or modified during the December activity, so the remaining boxes need to be checked and/or modified. *A big thank you to John who has looked after the timber and tool needs for us.*

You will need clothing and footwear suitable for the terrain and weather conditions on the day.



Butterfly Orchid Alarm by Ken Harris

The Butterfly Orchid – *Sarcochilus australis*, is the pride of Morwell National Park and perhaps the main reason for the park being declared. The plants are distributed in Fosters Gully along 900 metres of the gully, growing in deep shade as epiphytes on various shrubs and trees.

In 1986 I set out 4 plots for regular monitoring of the orchids, 3 of these are 10m x 10m, and one (because of the large number of orchids on the plot in 1986) was only 5m x 5m. Each plot has been surveyed in November of every year from 1987 to 2009, except for 1997, when I was out of the country.

This 2009 survey took place on 15th November and I was extremely alarmed at the result. I have been noticing a downwards trend in the number of plants over the last 5 years or so and this year the decline was even more marked. Three of the plots have very few orchid plants remaining, 2, 7 and 3 respectively. I was still able to find 44 plants on the fourth plot, but this is well below its peak number of 119 in 2004.



The table below summarises the numbers of plants and of individual flowers recorded on the 4 plots together since the preliminary survey back in March 1987. From about 2004, the decline is very clear.

Year	Prel	1987	1988	1989	1990	1991	1992	1993	1994
Plants	124	159	175	224	211	178	151	178	169
Flowers	-	396	591	482	333	407	295	514	454
Year	1995	1996	1998	1999	2000	2001	2002	2003	2004
Plants	136	131	128	136	165	189	169	149	164
Flowers	324	261	228	263	197	294	377	452	470
Year	2005	2006	2007	2008	2009				
Plants	95	129	97	92	56				
Flowers	353	495	182	235	140				

In 2001 a 5th plot was added to the survey. This plot was observed to have eight seed pods on it during 2001 (from the 2000 flowering) and the extra plot was put in to monitor the result of the high number of pods. In fact no new plants were detected on the plot from these seed pods, but the surveying of the plot has been continued ever since. This plot also shows a steady decline in the number of plants, most marked in the period since 2004 (see the table below).

Year	Prel	2001	2002	2003	2004	2005	2006	2007	2008	2009
Plants	92	91	87	65	74	53	39	32	26	8
Flowers	-	160	125	142	165	167	119	62	47	9

I believe there are three causes for the decline.

The first is the very low reproductive rate. It is not known what insect is the prime pollinator for the Butterfly

Orchid, but whatever it is must be relatively uncommon in the park. Between 1987 and 2005, a total of 6691 individual flowers were observed on the 4 original plots and yet only 28 seed pods were produced. That is one seed pod for every 239 flowers!

This low reproductive rate has nevertheless seemed adequate for the period from 1987 to 2004 as despite fluctuations the population has been fairly stable and a few new plants have been observed.

The other two factors seem to be the result of global warming. The plants are dependent for water on rain running down the stems of their host plants and on morning dew. Long periods without rain and with very low humidity, so that dew is hardly present, puts the plants in great stress. Several large plants have been observed to lose all their leaves, but if the next year has a better rainfall they may recover, produce new leaves and flower again. Successive dry years lead to many plants expiring.

In addition the dryness has a major effect on the shrubs and trees on which the orchid plants live. Shrubs under drought stress will often have branches die and fall from the shrub. If the drought continues the whole plant is likely to die. The orchid plants are not dependent on the branch they are on being alive, but a dead branch is not going to remain around for very long and the orchids do not survive if the branch they are on falls on the ground. *Coprosma quadrifida*, the Prickly Currant-bush is a major host to the orchids, having a fine network of twigs to catch wind-blown seed. Unfortunately the *Coprosma* plants in Foster's Gully are particularly effected by the drought. Many have lost branches and quite a number have died in the period of this survey, with little sign of new plants coming to replace them. Loss of the *Coprosmas* means the loss of a lot of orchid plants.

These two effects of drought are causing the loss of a great many orchid plants and the low reproductive rate is preventing them from compensating for these losses.

It is perhaps a rather alarmist view, but my feeling is that the Butterfly Orchid colony in Morwell National Park is not going to be there much longer. I think it is possible that only 5 to 10 years could see the demise of the orchids (unless there is a significant change in the weather).

Giving a lot of thought to the implications of this I am very aware that we are powerless to intervene in the main causes of the decline, but it does seem that there is one area in which the orchids might be helped to at least stay with us a little longer.

Manual pollination of orchids is a well known procedure practised a great deal by orchid growers, but also applied to assist some wild populations, even in Victoria. Our Butterfly Orchids set very few seed pods each year and if this could be significantly increased then there is a chance of getting new orchid plants established in Fosters Gully.

It seemed to me that an immediate trial of this process would be of value and with the support of the Latrobe Ranger in Charge, Andy Gillham I was able to carry out a small scale trial this year.

I also contacted Peter Kiernan of the Australasian Native Orchid Society to seek advice on how to perform the pollination. I was very fortunate. Peter was about to set out, accompanied by Neil Anderton, also a member of ANOS, on an orchid hunting trip to Omeo and would be passing back through the Latrobe Valley on Friday 20th November. I was able to organise permission in time and I had a preliminary look, locating some suitable orchid plants and noting their GPS co-ordinates. On the Friday I met up with Peter and Neil and we went up to Fosters Gully, armed with a cardboard box with polystyrene in it and a pack of wooden toothpicks.

Orchid pollen is stored in two little sacs, called pollinia. These have a common stalk with a sticky tip, which is designed to glue it to a passing insect. The technique demonstrated by Neil is to touch under the hood of the column of the orchid and hope to get the pollinia attached to the tip of the tooth-pick. This part of the process is quite straightforward, and I was soon able to collect the pollinia and then stick the other end of the toothpick into the polystyrene to carry them gently to another orchid plant.

My picture shows a pair of *Sarcochilus australis* pollinia attached to the tip of a toothpick.



The next stage proved much harder. The pollinia from one orchid need transferring to the stigma of another orchid, which is a smooth plate situated just below and behind the pollinia (not accessible until the pollinia have been removed). Getting to the right place is not difficult, but getting the pollinia to release from the toothpick and attach to the stigma is much harder. The attachment was very strong and attempts to turn the toothpick round and round often failed to break the bond. Sometimes I lost the pollinia without attaching them to the stigma. Mostly we simply hoped that some of the pollen from the pollinia would have attached to the stigma.

The following Tuesday I returned to the Park to check whether any of my attempts had been successful. I had attempted pollination of 26 different orchid flowers on about 10 orchid plants. The first cluster of three plants that I checked gave me hope as 2 of the flowers I had hand-pollinated were clearly growing seed pods. Sadly that was all I found. I do not get my orchid pollinator's badge as those 2 were the only successes among the 26 flowers I had worked on.

I am pleased to be able to report that I did detect 3 other orchid flowers that were growing seed-pods, so the unknown insect, although scarce, is still at work in the Park.

I am sure that this trial had no negative effect and it has made a very small contribution to increasing the chance of new orchid plants getting started next winter (the seed pods do not open until June or July).

It is however not nearly enough to make any real difference to the situation. I believe that this exercise is worth repeating next year and on a larger scale, but I need to get more expert assistance in developing the technique for depositing the pollen onto the orchids. I shall be making an application for a less hurried, but larger scale, exercise to be carried out in the park next November in the hope that we can at least slow down the decline of our beautiful orchids.