Newsletter

For Friends of the Christchurch Botanic Gardens Inc To Promote, Protect, & Preserve No 89, Spring 2012

President's Report

You will have noticed that the Cunningham House, Townend House, Gilpin House, and Fern House are still closed to the public. More detailed structural engineering examinations are being waited upon before we know the fate of these buildings. The stock of plants from the Cunningham House has been reduced in number, while the remaining plants have been moved to an area where they can be maintained. There is no production of plants for the Townend House this year, so we will unfortunately not benefit from the usual outstanding show of Begonias, Schizanthus, Cyclamen, and Calceolarias this year. We are all getting very good at looking forward to the future.

We do have a new Botanic Garden Centre to look forward to, and I personally am very happy that this project will go ahead. Tender documents have been sent out for the build, and it is expected that a tender will be presented to Council in September. If the tender is accepted, work will probably begin shortly after so that the project can be completed by the end of 2013.

The Friends' Committee has recently committed \$2,500 towards a summer scholarship for a student from the University of Canterbury. This figure has been matched dollar for dollar by University of Canterbury for a full scholarship. The project, Botanic Sentinels, will involve a collaborative team from the University of Canterbury and staff at SCION and other Crown Research Institutes as part of a Better Border Biosecurity (B3) effort. It involves the proactive use of the plant collection in the Botanic Gardens to identify potential pests and diseases of exotic plants before they become a biosecurity problem. The two scholarships we helped fund last year were extremely successful.

The Friends and Botanic Gardens photographic competition was launched in July with an afternoon tea provided by the Friends. The Mayoress, Jo Nicholls-Parker, officially opened the competition. The competition will run for almost a year, so that entrants can take advantage of all four seasons. We look forward to this being another hugely successful event in our Gardens. For more details go to our website www.friendschchbotanicgardens.org.nz

We are grateful to Landcare Research for hosting our website for us; this provides us with the freedom of building and editing the site as we please. We expect the website to become much more comprehensive. Entrants to the photographic competition will use the site. We are also looking at the possibilities of online registration for the Australasian Botanic Guides Conference which we are hosting next year. We have also had an idea put to us for displaying historical images of the Gardens. With all this in mind, we are looking out for someone with the necessary background to become our web master. Is there anybody out there? If so contact me on 348 5896.

The Guiding team has been very busy of late, with a new intake of nine guides to join the team. Each new guide has just completed an in-depth training that has been designed and delivered by Faye and Neil Fleming. Faye and Neil have put a great deal of energy, time, and enthusiasm into the training of guides and we owe them a huge amount of gratitude.

The propagation teams have been relatively quiet over the winter months, with re-potting and potting up of growing on lines being the main activities. The glasshouse has still not been erected on the new Friends nursery site. We look forward to this happening so that the teams have a more comfortable and productive work environment. Considering the challenges they have faced over last twelve months, the propagation teams have done a sterling job.

Charles Graham

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New Friends' website

Have you visited the new Friends' website? The address is http://www.friendschchbotanicgardens.org.nz/

Friends of the Christchurch Botanic Gardens Inc PO Box 2553 Christchurch 8140 or friendsofthegardens@gmail.com

John Clemens

Distribution of Newsletter

We distribute the Newsletter by email to those members who have given us their email addresses and who have not requested otherwise. If you would prefer to receive the Newsletter by mail, rather than electronically, please contact Philippa Graham – phone 348 5896 or email philippa.graham@gmail.com

Enquiries about membership should be made to Philippa Graham (phone number above)

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Gardens' News

From Curator John Clemens

Despite snow and earthquake, and apparently escaping the worst of the frosts, the glorious *Magnolia campbellii* near the western entrance to the Botanic Garden is in flower again. "A large tree carrying many hundreds of blooms is an unforgettable sight" as described by my old Hilliers' Manual of Trees and Shrubs. It is a welcome reminder that warmer weather to accompany those progressively longer days is just around the corner.



Winter has been a busy time in the Botanic Gardens. Snow was a major problem in June, breaking down smaller plants and splintering larger limbs of evergreen trees, in some cases even breaking whole trees apart. In early July Botanic Gardens staff put on a winter Kidsfest "treasure hunt" that told the story of how plants and animals survive the rigours of winter: "Survive Winter" in the Botanic Gardens finished with a fantasy Winter Wonderland, complete with gnomes (appropriately dressed for winter), popular penguins, and a lone woodsman keeping warm in an improvised hut.

July was also the time for our annual Research Colloquium when many members of the Friends took the opportunity to listen to staff and students from the University of Canterbury and the Council planning section speaking on a range of interesting topics. Friends Committee Member, Alan Hart, has described proceedings later in this Newsletter.

And August was busier still with applications being lodged with the universities for next summer's Student Scholarships, training sessions for new Guides expertly organised by Faye and Neil Fleming, the launch of the Botanic Gardens Photographic Competition, and a review of how the year ahead will affect staff, Friends' activities and the fabric of the Botanic Gardens itself. Speaking of which, we hope to be able to make a start

on the new Botanic Gardens Visitor Centre very shortly.

Magnolia campbellii was first described as a species and successfully introduced to cultivation in Europe at about the same time that the Christchurch Botanic Gardens were being established 150 years ago. Since then the landscape, buildings and plant collections of the Botanic Gardens have had a dynamic existence: trees have been planted, grown up and many felled at the end of their lifespan; feature gardens established, dug up and remade; and buildings erected, perhaps to be removed when they, like the older trees, reached the end of their days, or replaced with newer versions of themselves. This pattern of change is described in our Management Plan (page 21) as "the result of the varying design inputs of the different curators, influenced by political and public initiatives, values, new plant introductions and fashion." Looking to the future, Associate Professor Jacky Bowring, Head of the School of Landscape Architecture at Lincoln University, has prepared a concept plan to guide development across the whole site in coming decades.

As we approach our official 150th Anniversary in 2013, it is timely to remember our primary goal "to promote understanding and appreciation" of the world's flora, including Southern Hemisphere plants for their botanical and horticultural attributes. We cultivate and display plants to be appreciated and enjoyed by the public, and we also help people to understand the significance of plants by conserving rare species, running educational programmes and being active in research.

On the research front, we hope that another batch of Summer Scholarship students will join us this coming summer to undertake short research projects. These will be supervised by academic staff members at the University of Canterbury and Lincoln University, assisted by Botanic Gardens staff. Work conducted last summer on the bird and insect visitors to flowers will be continued to determine how effective these visitors are for pollination success. In addition, work will start on the use of the plant collection as an early warning system for potential insect pests (part of the International Plant Sentinel Network) and to assess the biosecurity risk posed by the plants themselves. These projects will help us to understand the biodiversity of our Botanic Gardens, and contribute towards fulfilling our conservation and research goals. The Friends of the Christchurch Botanic Gardens is supporting one of these student projects, for which I would like to express my sincere appreciation. The Friends' financial, material and voluntary support for the work of the Christchurch Botanic Gardens overall is very much appreciated.

Second Christchurch Botanic Gardens Research Colloquium 2012

Amid earthquakes, snowstorms, closure of glasshouses and demolition of buildings in the city, the Christchurch Botanic Gardens have continued to function as a venue for research into the plants that live there, not only as individuals but also as members of communities of other plants and organisms. The nature and importance of the relationships among organisms was the theme of the second Christchurch Botanic Gardens Research Colloquium 2012 held on 17 July.

Last year, participants in the first colloquium gathered in a partially repaired building at the University of Canterbury. This year a much larger audience met in the repaired and refurbished Christchurch City Council headquarters, now a notably tall and functioning building amid the flat and empty land in the centre of the city.

We are frequently told of the extinction of species as humans press ever harder on the natural world. What is often not commented on is that with the loss of individual species goes the loss of the relationships that they had with others eg the loss of an insect may mean that plants are no longer pollinated. Professor Tylianakis (University of Canterbury) gave an overview of the impact of humans on natural ecosystems and pointed out the complexity of the relationships that exist among the organisms in those systems.

Relationships among organisms do respond to changes in their physical environment. In one example discussed by Prof. Tylianakis, a study in New Zealand of the input of nitrogen and heat into plant communities at Cass and the Lewis Pass, it was found that not only were there increases in plant biomass, but that the increase in the mass of lepidoptera feeding on the plants was proportionately greater than that of the parasites feeding on the butterflies. This suggests that the capacity of the parasites to control the herbivores did not keep up with the increase in herbivores. The real point is that we can expect changes in temperature and nitrogen deposition (two of the principal changes brought about by human activity) to change relationships at all levels of an ecosystem.

The complexity of these and other interactions makes it difficult to predict possible changes to them; Prof. Tylianakis suggested that it might be possible to learn how to do this by considering other very complex networks - such as those existing between users of Facebook!

The importance and complexity of relationships among organisms was further highlighted by Dr. William Godsoe (University of Canterbury) who has studied the association between Joshua trees, in the USA,

and their pollinators, Yucca moths. Different species of Yucca moths are associated with different forms of Joshua trees. The differences in the Joshua trees do not appear to be caused directly by differences in the physical environment such as climatic gradients but by co-evolution between the trees and the moths.

In summer, students from the University of Canterbury carry out research projects in the Botanic Gardens and the wider Christchurch area; the symposium was an important opportunity for them to show their work.

Sand volcanoes resulting from liquefaction are one of the more vivid and intriguing (or horrible and disturbing depending on your experience of them) consequences of the Canterbury earthquakes. The question arises as to whether the large disturbances to soil structure have any ecological consequences. *Malva sylvestris* is a very common weed of disturbed sites. It is often infected by a fungus, *Puccinia malvacea-rum*, showing as rusty spots on the leaves. Roseanna Gamlen-Greene, working in the Travis wetland, sought to find whether this interaction between species was affected by liquefaction. No difference was found in the degree of infection, as evidenced by the number of spots on the leaves, between plants growing on soil where liquefaction had occurred and those where it had not. Perhaps the root systems had adjusted to the soil disturbance so that the resource utilised by the fungus, the leaves, remained unchanged.

By way of something completely different, Matt Kippenberger looked at the occurrence of Canterbury mudfish and other wildlife in ponds within the Botanic Gardens. Ponds within the Gardens suffered substantial damage in the earthquakes - many emptied - so represent very disturbed habitats for the creatures within them. The study illustrated the speed with which populations of organisms can change: from diptera and worms to zooplankton, snails and caddis flies in a matter of weeks. The mudfish are persisting in one small shallow pond, and could potentially form viable populations in some of the other ponds.

The opportunities offered by the Botanic Gardens for study of interactions among organisms was nicely demonstrated by a study of that most important of interactions, pollination. In the Gardens, native and exotic plants exist in relatively close proximity and are visited by native and exotic pollinators, both birds and insects. Work by Christie Webber and Amanda Peterson was described in a previous issue of the Newsletter (No. 87, 2012) but to recap, native insects generally visited native plants while exotic insects generally visited exotic plants but native insects did make a significant number of visits to exotic plants. As with native insects, native birds, especially silvereyes, appear to be rather catholic in their taste as pollinators, visiting both native and exotic species. Introduced birds appear to be relatively unimportant as pollinators of either native or exotic plants.

With respect to topography and other physical features, the Gardens have been relatively unaffected by the earthquakes. This is in contrast to other parts of the city where physical changes have sometimes been very marked. Dr. Zoe Dewson (Christchurch City Council) described some of the changes to waterways: deposition of silt and sand, slumping of banks, ingress of raw sewage. Despite these changes, initial indications are that the fauna in the waterways is not greatly or irreversibly affected. Habitats for terrestial plants also changed suddenly (Dr. Trevor Partridge, Christchurch City Council), so that it is possible to classify plant habitats into those unaffected (e.g. Riccarton Bush, the Port Hills), those where the plants are stressed (e.g. wetlands, rock outcrops) and habitats of an ephemeral nature (abandoned land, demolition sites). The ephemeral sites have the potential to be excellent sites for the study of subsequent changes in inner-city flora, but they be may all too ephemeral as many have been turned into car-parks. This problem would also be recognised by geologists who can also find that important evidence of scarps, fault-lines, etc is quickly removed by well-intentioned repairs to roads and other services.

Botanic gardens have a long and venerable tradition as places for research into plants and their communities. Just as much as being a refuge for human beings, they offer a controlled and uniform environment where the researcher can be much clearer about what is impinging on the objects of study than in the complex, changing world outside the garden gates. The second Christchurch Botanic Gardens Research Colloquium 2012, was evidence that research in the Gardens is permanently under way.

Alan Hart

Articles

The rediscovery of the Dawn Redwood Metasequoia glyptostroboides

In 1941 the Japanese paleobotanist Shigeru Miki had established the new genus *Metasequoia* from Pliocene fossils about five million years old. That very year, a Chinese forester found a strange new conifer in the forests of eastern Sichuan. In a process of referral from one expert to another, specimens from the tree got to China's leading dendrologist H H Hu in Peking. He identified it as a *Metasequoia* from Miki's fossil evidence. China was at war, and there was no money to support an expedition to the village of Modaoji, but Professor Merrill, then director of Harvard's Arnold Arboretum in Boston, set about raising the money, and the Chinese mission to collect seed from the "living fossil" proved successful. Quantities of viable seed were sent to the Arboretum, who shared it with botanical institutions and individuals around the world, including the Christchurch Botanic Garden. In 1948, an expedition led by Ralph Chaney, professor of paleobotany at UC Berkeley travelled to China specifically to find the tree and pay homage to it. Wilson Chen Yunqing, the Chinese foster brother of my husband Bill Willmot, was interpreter for that group.





Dawn redwood, view of summer foliage

A Dawn redwood tree in the Christchurch Botanic Gardens

Chaney coined the name "dawn redwood" to refer to its prehistoric beginnings. In the generic name, meta means "akin to" in Greek, and sequoia to the generic name of the California redwoods, a reference to Cherokee Indian chief Sequoya (1770-1843). Sequoya recorded the Cherokee language. The species name refers to the genus *Glyptostrobus*, the Chinese swamp cypress, with which the dawn redwood had been originally confused.

By the 1940s, the halcyon days of plant-hunting were over in America; World War 11, severe quarantine restrictions and the high cost of travel altered the old style of collecting forever. Since the 1970s, however, an expanding spirit of friendship and co-operation has grown between American and Chinese botanists, with exchange visits and expeditions. In 1980 the Sino-American Expedition including Arnold horticultural taxonomist Stephen Spongberg explored the Metasequoia valley and Shennongjia Forest District on the Yangtze Gorges. New species were added to the old, and new friendships were forged based on the brilliant individual expeditions to China more than 100 years ago.

Diana Madgin.

Look at that tree - Nootka cypress Chamaecyparis nootkatensis

One of our new guides-in-training asked where the very fine specimen of *Chamaecyparis nootkatensis* on the Armstrong Lawn originated and what the name refers to. The Nootka Cypress, also known as the Alaska Cypress, extends from the Canadian Pacific rain forest all the way north into Alaska.



Both the species and the cultivar are found in New Zealand public parks and gardens. The Nootka Cypress is broad based and pyramidal, and the foliage smells like turpentine when it's crushed. Male and female cones form clusters at the end of branchlets, males yellowish to white, females blue, then maturing to rounded brown cones. Branches swell from the trunk horizontally, with the lowest quite near the ground. The orange-brown bark is reddish and stringy.

Nootka cypress on Armstrong lawn

The Nootka First Nations people are a group of closely related North American Indian tribes. The Nootka inhabit the west coast of Vancouver Island in southern British Columbia. They are a peaceful maritime people with an economy based chiefly on fishing, principally salmon. Historically, Nootka were whalers, and they lived in permanent villages of cedar-planked long-houses, each accommodating several families.

Diana Madgin

Art in the Gardens: Sam Mahon's sculpture Regret

This sculpture was made for the third Sculpture in the Gardens show (November 1997 to April 1998) that was held every second summer in collaboration with the Robert McDougall Art Gallery. The inspiration for the event was wind, water and was to involve kinetic or moving elements. The artists participating were Randall Watson, Evan Webb and Sam Mahon.



Detail of "Regret" by Sam Mahon

Regret, is a spidery tower intended to reflect the "messy reality" of human life. Over six metres high and made from steel rod of various thicknesses, the sculpture rises up out of the small pond on the Archery Lawn. As well as a windturned bird on the top of the structure, and revolving masks halfway down, there was also to be a partially submerged figure reclining in the water, piggybacking a smiling young boy (now removed). These combine to produce a bittersweet evocation of times and people past. Materials were generously supplied by Fenwick Reinforcing Ltd.

Sam Mahon is an artist who lives in North Canterbury in a reconstructed flourmill. He works as a painter, sculptor (mostly in bronze) and a printmaker. He is a superb draughtsman and designs and builds almost everything from musical instruments to miniature rockets.

He is also a writer. His first book *The Year of the Horse* won the Best First Book award in the 2003 Montana Book Awards. Sam learned his love of language from his father, the late Justice Peter Mahon, known for the Erebus Inquiry and also for his book *Dear Sam*. Sam is an articulate master of the understatement. The things that have ever been stable for Sam are the rivers and hills and the stones. His next book *The Water Thieves* was very topical.

Since *Regret* was installed, it received unanimous acclaim and has delighted visitors of all ages and nationalities. Sam Mahon suggested that he would like the sculpture to remain, if and when a sponsor could be found. Robin Judkins of Coast-to-Coast fame agreed to this and a recommendation was put to the Christchurch City Council and this was approved and adopted.

Faye Fleming and Barbara Brailsford

Tropical giants

Honolulu is a city that values its trees, and nowhere is this more evident than in the 13-acre Foster Botanical Garden on the southern edge of Chinatown. Native sandalwood forests once covered these islands, but by 1820 they were completely clear-felled, decimated for export to China. German botanist, Dr William Hillebrand, was invited to Hawai'i by Queen Kalama in 1853 to study those tropical plants that could be grown for their economic value. She leased him land, which became the core of the garden.

On the long haul to Canada, we always stop in Hawai'i and visit this treasure trove of tropical and subtropical trees. This time we booked a guide and treated ourselves to some expert knowledge.



Indian banyan tree

Many of us know of the sacred Indian Bo tree, even if we have never seen one. *Ficus religiosa* is the tree under which the Buddha was sitting when he became enlightened. It is one of the Exceptional Trees of the arboretum and a direct descendant of the original tree. As in other species of fig trees, the flowers grow inside "figs": hollow, fleshy receptacles lined with flowers and fertilised by miniscule wasps.

The Indian banyan, *F. benghalensis*, grows quickly, up to 18 meters, with a much wider canopy. From its horizontal branches, aerial roots reach the ground and thicken into trunks, so that one tree can develop into a large grove.

My favourite tree is the towering kapok. It's in the *Bombacea* family, native to tropical Africa. Kapok can't be spun, but some of us remember kapok-stuffed pillows, indeed, there are still some about! The kapok tree, like other tropical giants, has dramatically sculptured "feet", or buttresses. Many tropical species grow in high rainfall regions and have relatively shallow rooting systems and heavy canopies. The buttresses stabilise the tree in the same way a cathedral's buttresses hold up the great weight of its arches.



Trunk of kapok tree with buttresses

The baobab tree, Adansonia digitata, commonly referred to as the



dead-rat tree from the shape of its fruit and its thick "tail", is food to South African wildlife on the savannah. The night-blooming flowers provide nectar for bats, baboons eat the fruit, giraffes eat the young leaves, and elephants chew on the moist bark. Humans can make a drink from the fruit, and local African medicine uses baobab leaves. We sometimes glimpse these hollow "traveller's rest" trees in films about the African plains. The shiny grey trunk, which has a remarkable resemblance to a cluster of elephant feet, stores water in its fibrous spongy tissue.



Fruit of baobab tree

Trunk of baobab tree

Among the home-grown trees of the Pacific in this arboretum is the breadfruit, Artocarpus altilis, a pervasive source of carbohydrate. When it's baked, the starchy fruit tastes like fresh potato bread. Hawaiians

also use the lightweight wood for surfboards and the sticky sap for glue.

As luck would have it, the cocoa tree beans were ripening in mid-March when we were there. This tropical tree, Theobroma cacao in the Byttneriaceae family, is long known in Mexico and Central America but probably originated further south in inland Brazil. It produces two bitter-tasting cocoa beans in each brown, hard-shelled seed. Our guide told us that the Mayan people of Central American (AD300-900) made the first recorded hot chocolate from roasted beans, ground and mixed with water, goat's milk, corn meal, chilli and capsicum. It was, of course, a special brew drunk only by the nobles. In Toronto a week later, in an exhibition of Mayan culture, we saw a chocolate frothing pot in the shape of a conch shell. Such a pleasing coincidence.



Cocoa beans

The cannonball tree, *Couroupita gulanensis* from South America, is compellingly strange. The tree sprouts beautiful red flowers down its trunk, and these develop into solid balls, up to twelve centimetres in diameter and filled with a foul-smelling blue pulp scoffed by chickens, pigs and peccaries. A notice on the tree warns visitors of falling cannonballs, and one would be foolish to ignore the advice.

Diana Madgin



Cannonball tree

Friends News

Training of new Gardens guides

Eight new guides are in training for the coming guiding season. Each day from mid-September to mid-April a trained professional guide is on duty at the Museum entrance to the Gardens to take visitors for a guided walk including the current highlights. Ariel Linklater, Chris Coster, Jeanette Christensen, Lois Tonkin, Mary Carnegie, Penny Martin, Susan Lawrence and Shirley Stead will add to our current team of trained guides and provide a deeper set of experiences and skills from which we can draw. These new faces are members of the Friends and their exciting backgrounds and skills will also provide a pool for other guiding activities such as the Festival of Flowers, the Saturday Friends' Walks and the forthcoming Guiding Conference in late October early November next year. Graduating from their 45 hour course will be nicely timed for the 150th anniversary of the Christchurch Botanic Gardens in 2013.

Neil and Faye Fleming are providing and coordinating training on a volunteer basis and they are being supported by the existing trained guides and the staff from the Botanic Gardens. The group began their training with an excellent presentation from John Clemens, Curator and Jeremy Hawker, Operations Manager as an introduction to our Gardens. The course, covering a wide range of topics will run on Mondays and Tuesdays throughout August culminating in a Pot Luck dinner as the graduation "ceremony" where the new guides will receive their badges.

Neil Fleming

Snippets

Singapore's "Gardens by the Bay".

The newly developed "Gardens by the Bay" could be worth a visit for those having a stopover, or longer visit, to Singapore. The Gardens were described in a recent issue of The Press.

The new attraction celebrated its official opening following seven years of development involving an investment of 1 billion Singapore dollars (NZ993.5 million).

The 101 hectare project comprises three waterfront gardens – Bay South, Bay East and Bay Central. Bay South alone houses over 2000 species and more than 700,000 plants from across the globe.

Taking centre stage are 18 man-made futuristic Supertrees ranging up to 50 metres in height. A key attraction of these giant structures is the 128 metre long aerial skywalk set among the treetops, 22 metres above the ground, enabling visitors to take in panoramic views of the garden, marina and city.

We in New Zealand tend to think of conservatories as structures in which plants from warmer countries can grow. In Singapore the conservatories are cooled so that plants from climates such as ours can thrive!

Events in the Gardens

From Lynda Burns, Visitor Services Team Leader. 941 7585 or 027 559 0181.

Vegetable gardens workshop. Saturday 8th September, 1.00 – 4.00pm.

Rhys Taylor, sustainability educator, will use the Curator's House Garden to inspire new and experienced vegetable gardeners.

Enrol now for a limited place. Bookings essential, with pre-payment of \$20.00 through the Botanic Gardens Information Centre. Phone: 941 7590 or christchurchbotanicgardens@ccc.govt.nz. Payment by cheque, cash, credit card or Eftpos at the Centre.

Burst into Spring! Sunday 16 September 1.00 - 4.00pm. Postponement date Sunday 23 September. Free.

Christchurch Garden City Trust presents a free concert with family friendly entertainment in the Daffodil Woodlands.

Spring super-sleuth 29 September to 14 October. Daily from 10.15 to 4.00pm.

Free children's activity. Suitable for children aged 4-10 years old.

Thaw out from the ICE. Use your senses to seek out the signs of spring.

Pick up the trail from the Botanic Gardens Information Centre.

Christchurch Botanic Gardens commemorative calendar

The Christchurch Botanic Gardens have produced a 2013 Calendar to celebrate the 150 years the Gardens has given pleasure and serene beauty to our community and visitors, 1863 to 2013.

Each month the calendar offers three images for display. These photographs – scenes, close-ups and historic images – give a year-round look into the splendour of the Gardens, how they have developed and how staff have kept them growing for a century and a half.

Example of the front and back cover of the calendar, showing the images included inside.

Calendars can be purchased from the Information Centre.

included inside.

The calendars come in two sizes:

Large calendar 250mm x 250mm

- CD of screen saver images included (inside the back cover of the calendar)
- Envelope provided separately for those wanting to post it to friends and family. There are enough envelopes to give one to each large calendar purchase. RRP \$24.95

Desktop calendar 150mm x160mm RRP \$11.95



