

THREE 'S's: SINGAPORE, SYDNEY, SPAIN



Keeping Botanic Gardens relevant
in today's world

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Old: **RBG Madrid** (L, 1774); Sydney (1816)
Valencia (1820s); **Singapore** (R, 1859)

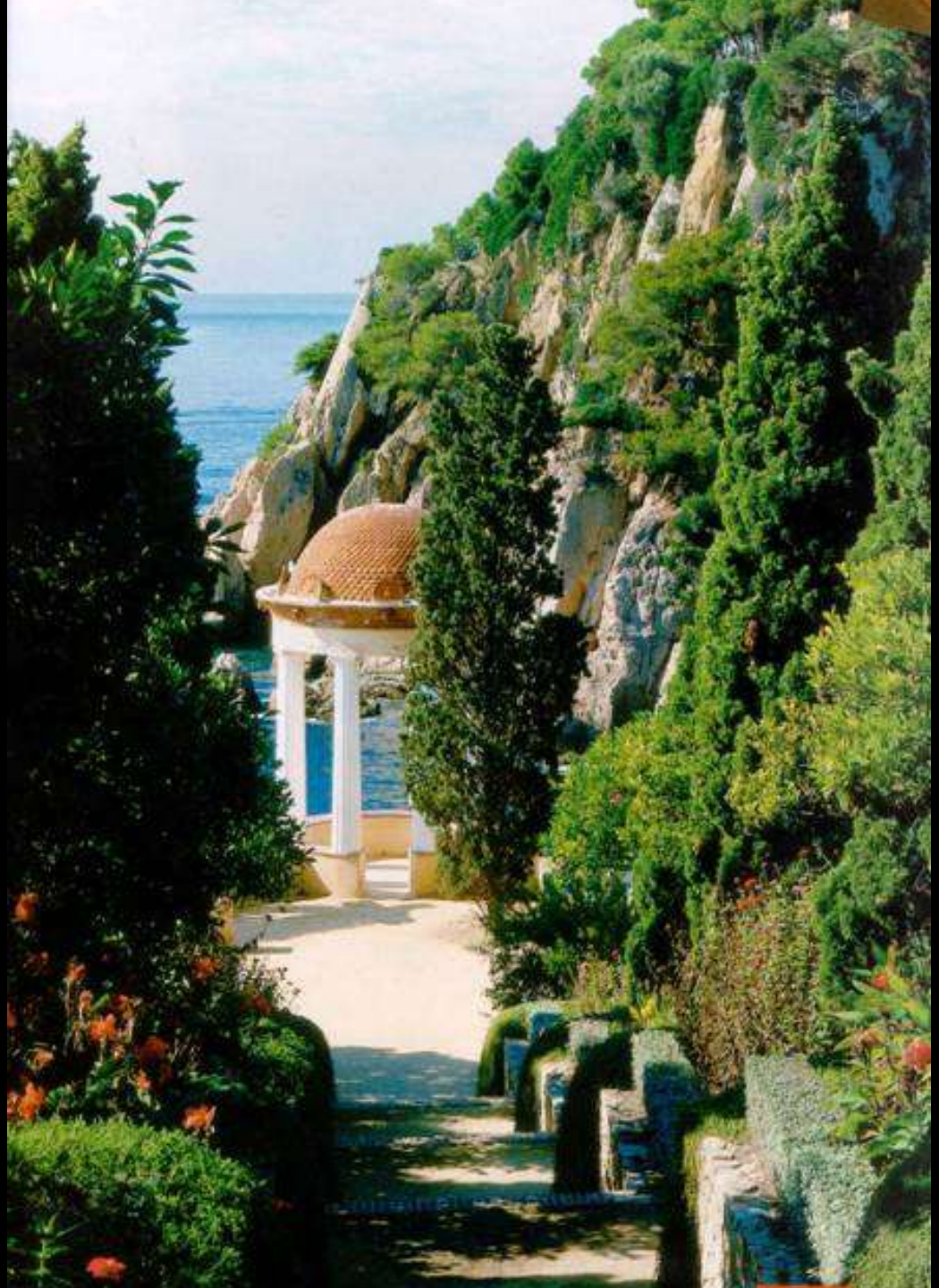


Young: **Soller**, Mallorca (1985): science focus



Young: *Mar i
Murtra, Blanes,
Costa Brava*
(1952)

Focus on
conservation &
tourism



Tourist attractions: **La Orotava, Tenerife** (1788)



Relevant to changing population, tourists?

Jardin de Canario, **Gran Canary** Is. (1952)



Relevant to smaller-
garden owners?
RBG Cranbourne, Vic.



& Apartment
gardeners?
RBG
Cranbourne
Vic.



More visitor needs: **Sydney** - shops & toilets



Around 5 million people visited RBG Sydney in 2016, an increase of c30% (OEH CEO).

Conservation issues: **RBG Sydney** (1816)

Aging, dying trees – Public understanding , renewal





Conflicts: moving **Sydney's** bats, tree deaths, palm grove renewal

Fashion: celebrity makeovers: Jamie Durie re-jig,
Sydney succulent garden – short-term projects / trends



Reimagined
reinstatements -
Guilfoyle's volcano
(1880s) **RBG**
Melbourne
(garden 1846)

'lava flow'
plantings
water-harvesting
& reuse



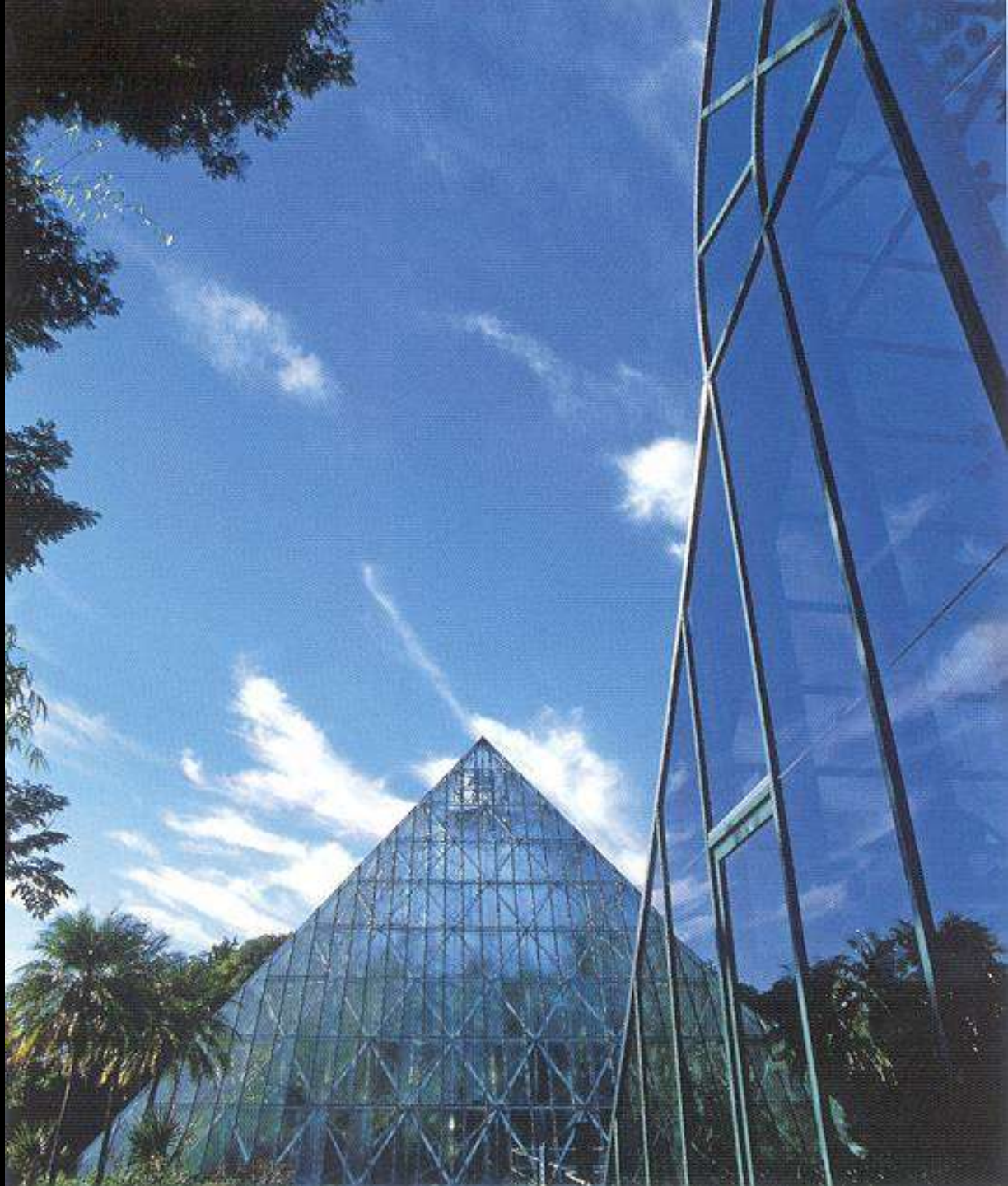


Re-done:
Adelaide BG's
waterlily house

Glass re-done –
out with 1988
Sydney Tropical
Plants Centre

never great for
plants?

Is The Calyx =
better?





All razzle and no substance?



Re-done: **Sydney's** lawn squares & ground covers –
smart adaptation of a popular feature – lessons for today

Collections as story-telling: *Evolution* garden, **Mount Annan BG**



Valencia: succulents
/ Mediterranean
rare species





**Adelaide BG's
Succulent
collection is
expanding (smart
with <600mm rain)**

Water Saving Garden The Dry Terrace

We live on a very wet planet, with 70% of the Earth's surface covered in water. There is 1,397,918,550,000,000,000,000 (1.397 billion 918,550 billion) litres of water on Earth. However, 97% is seawater, 2.25% is frozen in polar ice caps and glaciers, 0.74% is underground, and just 0.01% is freshwater in lakes and rivers.

Australia is the driest inhabited continent on the planet, yet we are one of the highest users of water in the world. Australia's average rainfall is 469 mm, whilst the global average is 1446mm. Rainfall in this country is unpredictable and infrequent, often leading to long droughts.

Average Melbourne households use between 240,000 and 270,000 litres of water a year and 70,000 litres of this is used in the garden. We tend to have thirsty gardens due to the planting of exotic (non-native) species, which are better adapted to the wetter climates of North America and Europe.

Australian plants are ideally suited to the creation of exciting and attractive gardens that need less water to flourish.

This terrace is a semi-arid garden featuring native plants that, once established, require little or no watering, other than rainfall, to flourish.

Key 10 plants from The Dry Terrace:

1. *Acacia saligna*
2. *Acacia saligna*
3. *Acacia saligna*
4. *Acacia saligna*



Is public education or
interpretation provided?
Jardin Canario, **Grand Canary** Is.



Cultivated
biodiversity: crops...

Madrid: grapes

Valencia: citrus





New audiences:
Sydney's Herb garden
1993 smart outreach
More interest in food...



Audiences: **Sydney**
HSBS Oriental Garden,
1997+ collections from
the wild. Site has Asian
associations from 1917

Attracting new audiences... Singapore



New audiences: Mt. Annan Bot.Gdn. (1988), **Sydney** - dry-stone wall workshops





Sydney's Cadi Jam Ora
garden 1996+ focus on
Aboriginal history

Audiences? Signs with attitude: 2015, Sydney BG

FASHIONABLE FERNS

In Victorian times, the world was struck with fern mania! No-one was immune. Precious collections of ferns were displayed in spectacular glass conservatories and Wardian Cases — an early type of terrarium. Scouring the Arizona desert, Brazilian cloud forests and swamps of New Zealand ... avid collectors travelled the world. And they were awestruck by Australia's gigantic Tree Ferns.

Exploration continues today. Australia is home to approximately 400 different species of fern, and there are about 10,000 species worldwide. From the tiny aquatic Azolla Mosquito Fern to the giant Angiopteris King Fern, ferns can be found in the most unlikely places — rivers, mountains or high in the tree tops.

Victorian fern gown obtained with fern motifs



GOING GAGA FOR FERNS

If you discovered a fern, what would you name it? Reddish scales on the leaves might inspire you to call it *Pyrrosia* from the Greek word 'pyros' meaning flame-coloured. Or perhaps you'd prefer to honour a person ... maybe a scientist or a celebrity?

Pop star Lady Gaga has 19 ferns species named after her. One, *Gaga monstraparva* (monster-little), is named for her fans — the 'little monsters'. The Gaga ferns were discovered because scientists have been using DNA to reorganise the fern family tree. Sometimes individual species or even whole groups, like the Gaga ferns, need to be reclassified. The new naming rights go to the scientist who untangles that branch of the family tree.

Lady Gaga in a gametophyte-like costume.



Art: Sydney's *Palm house*, 1870: changed use



Art: Sydney's sculpture walk – stories & place...





Art: 1999 *Folly for Mrs Macquarie* (Fiona Hall) wit, history...



Patronage: **Sydney's** micro-bat home or = high art?

Urge to FILL up spaces – pleasure park or botanic garden?



& Play: little locals LOVE it: an active recreation magnet!

Do they contribute to conservation?

Soller: Ex-situ...; Reintroductions to the wild...



Collection strengths and priorities: rarities & conservation issues? **Jardin Canario**, Canary Is.



Rare &
Endangered
species: **Soller** BG,
Mallorca





Sydney's Rare & endangered garden, 1996-8 conservation /education themes

Conservation –
NZ native plants
Christchurch BG
– ‘naturalising’
the Avon River’s
banks...



Facilities to help visitors 'see' & engage in research / botany: **Singapore**



Shaker Room

Shaking the tissue in the nutrient solution is to improve the supply of air and nutrients to the tissue. Shaking also helps to confuse the tissue. Without a sense of gravity, they do not differentiate into shoots and roots but grow into more tissue. When enough tissue has been formed, the shaking stops to let plantlets (with shoots and roots) develop. A very large number of plantlets can be obtained from the clusters of tissue you see in the flasks.



Ken Hill with fossil

Sharing new finds /
introductions:
Ken Hill & Wollemi pine,
Sydney, 1998



Vital fields of encounter Singapore



Meeting places: science & play: **Singapore**



Roles in daily lives:
recreation, education,
community plots,
meeting up...



Valencia's BG (R)
& Parc Marxellanes
(L)

New wetland resource
to teach history and
ecology – and relax

Engaging with schools & universities: Singapore



Children's gardens, multilingualism: Singapore



School groups and
outdoor classrooms
Jardin Canario, **Gran**
Canary, Canary Islands



www outreach: digitising collections: Singapore





& here come
Sydney's 1.4m
specimens, @
high-res... 24/7...



Accessible to all? **Singapore** metro, gate greeters



Sydney's new fernery, 1992-3

(John Barbeceto) replaced 2 shade houses





Respite from the city,
Sydney Fernery
By a private donation



Retreat & recharge in urban life: **Singapore**



Who decides on management and changes?

How? Experts? Twitter/ Instagram? **Barcelona**



Commerce: lure, offer, balance? **Singapore**





Commerce - Events & income: parties, movies,
corporate functions - Good: new users?
- Bad: damage, vandalism...?



Are they seen
& used more
as parks?

Sydney (L)

Singapore (R)

Their Future?

Spectacles, chasing \$
or wider valuing of
their many layers?

