

CALEYI



NORTHERN BEACHES GROUP April 2018



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Next Meeting: 7.15 pm Thursday April 5, 2018 at
Stony Range Botanic Garden, Dee Why.

Presentation: Library Session. Selected books
reviewed. Followed by **Extraordinary General
Meeting.**

Supper: Jan C & Cathy

Coming Up:

APS Northern Beaches visit Botanica Art Exhibition: Symbiosis

Australia's leading contemporary botanical art
exhibition Botanica returns to the Royal Botanic
Garden Sydney, exploring the complex and
remarkable relationship we humans have with
plants. Saturday April 21, 2018. Penny will email
details.

From the Editor

Thankyou Penny and Richard for the walk report
and great photos and Eleanor for revealing her life
with plants.

Please send me articles or photographs that you
think the members would enjoy. Jane. email:
march@ozemail.com.au

MARCH WALK IN WARRIEWOOD WETLANDS

Penny Hunstead, photographs Richard Hunstead

A planned walk – Koolewong, near West Head – was cancelled, in February, due to low number of walkers. So, in March, a walk in the Warriewood Wetlands was chosen, with better numbers of walkers interested.



Seven of us began the walk at Katoa Close, in sunny weather. The walk included two areas, divided by Garden Street – the Warriewood Wetlands (E.) and Irrawong Reserve (W.) The 26 hectare area of Warriewood Wetlands is the largest remaining Sand Plain Wetland in northern Sydney.

From Katoa Close, we entered a small *Casuarina glauca* forest with its welcome shade. From there, a series of long wide boardwalks traverse the waterway of Mullet Creek. The dominant tree species were *Casuarina glauca*,

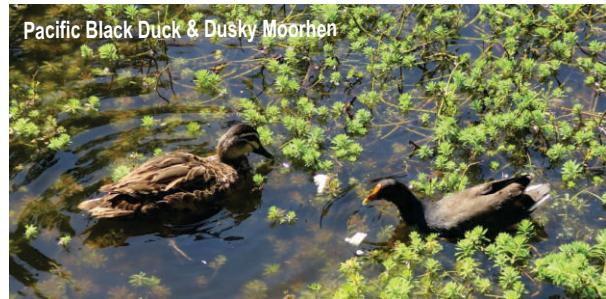


Eucalyptus robusta, (some on very wet sites with root buttressing), *Glochidion fernandi*, *Livistona australis* and *Melaleuca quinquinervia*, growing in the swampy shallows or adjacent land. There were also numerous *Omalanthus populifolius*, the plant commonly seen in sheltered disturbed sites. Almost every eucalypt had *Parsonia straminea* climbing the trunk and in some cases, the branching vines that almost smothered the tree branches were adorned with heavily flowering cymes.



Water plants included *Typha orientalis*, *Phragmites australis*, *Alisma plantago-aquatica* and *Myriophyllum* sp.. In the marshland, we saw *Gahnia sieberana* and *Juncus kraussii*. Exotic species included trees (*Erythrina crista-galli* and *Cinnamomum camphora*), shrubs (*Lantana camara*, *Ochna serrulata* and *Ligustrum sinensis*) and aquatic plants (*Ludwigia peruviana*, *Salvinia molesta* and *Cyperus papyrus*).

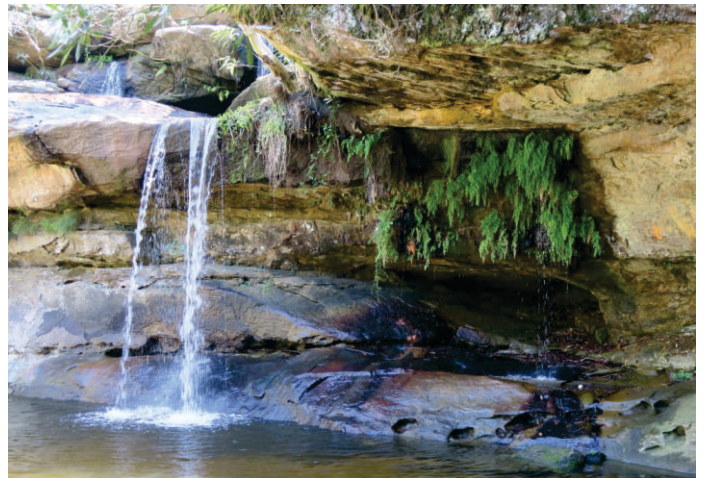
A delightful bonus with this wetland walk was the number and diversity of native birds and other animals that we saw and heard, along the way.



Eighty species of birds have been recorded there. We saw Pacific Black Ducks (quaintly named *Anas superciliosa*!), Chestnut Teal (*Anas castanea*), Dusky Moorhens (*Gallinula tenebrosa*), Purple Swamphen *Porphyrio porphyrio* and a male Brush Turkey (*Alectura lathamii*) on the biggest nest that any of us had even seen. Many different bird calls (Bellbirds, Whipbirds) were heard, without the birds being seen, as was the croaking of an unidentified frog. One sharp-eyed person spotted a bird-dropping spider (*Celaenia excavata*)!



Crossing Garden Street, into the Irawong Reserve, we walked in the almost total shade of Mahoganies and *Livistona australis*. Other species included *Eupomatia laurina*, *Syzygium oleosum*, *Cyathea australis*, *Melaleuca linariifolia*, ground ferns and *Cissus* vines. This walk followed



Mullet Creek and ended with a delightful surprise; the beautiful Mullet Creek-Irawong waterfall and its large white sandy beach.

Information from the Northern Beaches Coastal Environment Centre states that the Wetlands through which we walked has three Endangered Ecological Communities of plants and some of the highest fauna values in Sydney. Ten species of migratory birds come there from as far as Russia and Japan to feed and breed. The precious ecosystems include Coastal Rainforest, Sand Plain Wetlands and Sydney's largest remaining stand of the endangered Swamp Mahogany Forest.



It was a longer walk than we had envisaged, but it was almost level walking and much of it in the shade. Six of us made our way to Limani's restaurant at Narrabeen. Memories of our walk and other topics were discussed, over really enjoyable lunches.

MEMBER PROFILE

Eleanor Eakins: My Journey with Native Plants



Eleanor as a tulip in a Sunday School concert

I spent my childhood at Chatswood spending many happy days with the bush as my backyard in Ferndale Park. I still have my first bird book, 'Australian Bird Life' by Charles Barrett, that my parents bought me when I was quite young as I obviously showed an interest.

When I was about 12 or 13 and started making scrapbooks of pressed and illustrated wildflowers I was given Thistle Harris' book 'Wildflowers of Australia' to help with identification. My scrapbooks and list of many species that I collected in the early 50s in the bush behind our house is now with the Willoughby Historical Society. I wonder how many can be seen there today!

My interest then lapsed for many years as a young mother and, although my parents were keen gardeners, going on native plant identification courses and planting natives themselves down the back, I took little interest until I visited friends at Avalon with many birds around their house and decided that I would also like to have birds in my backyard at Forestville.

Luckily Betty Maloney and Jean Walker's book 'Designing Bush Gardens' had just been published and became my inspiration as, with a two year old in tow and much to Norm's horror, I dug out all of his lawn and started planting. If everything had survived we would have needed a machete by now to get out the back door!

With Norm, I attended meetings of the Ku-ring-Gai Branch of APS before joining the Warringah Group, I spent more than 20 years doing bush regeneration at Davidson Park, Garigal and 5 years mounting specimens at the Royal Botanic Garden.

When my last child went to school in 1985 I started as a volunteer at Stony Range and am happily still there!
Eleanor Eakins 2018



Bob Aitken and Eleanor receiving Australia Day awards with Mayor Michael Regan.

PLANET EARTH NEEDS MORE TREES!

Rotary Club of Turrumurra March 19, 2018

Did you know that deforestation doesn't only happen on land?

In the 1980s, the forests of crayweed off the coast of Sydney mysteriously disappeared along the 70km stretch from Palm Beach to Cronulla, with devastating effects on marine life in the area.



Turrumurra Rotary is working with the University of NSW to reverse the process by planting new forests of crayweed.

Last Thursday, about a dozen of us joined Dr Ziggy Marzinelli's team from UNSW's Sydney Institute of Marine Science to plant 135 crayweed trees off Mona Vale Beach. Half the trees were male, half female. Now that Sydney's sewage is pumped well out to sea, these trees are again able to reproduce.



TRC President, Fiona Jenkins, says "we're doing this as part of Rotary's worldwide objective to plant one tree for every Rotarian around the world by 22 April—Earth Day. That's well over a million trees! And we're doing the crayweed forest as a gift to the Sydney community. It would be great if Sydneysiders could help us do more."

If you'd like to help, contact us at secretary@turrumurrarotary.org.au or make a donation to UNSW at www.operationcrayweed.com

WESTERN AUSTRALIA'S BANKSIA FARM

Australian Geographic February 19, 2018 Angela Heathcote



Image Credit: Krystyna Szulecka

Banksia enthusiasts Kevin and Kathy Collins run the world's only complete banksia arboretum but getting the entire collection was no easy task.

Kevin Collins has loved banksias ever since he was a child. "When I was young we'd collect the banksia cones on our farm for firewood," he tells Australian Geographic. "I used to climb trees and suck nectar out of the flowers."

He's found quite the soul mate in his wife Kathy who shares his love for banksias and Western Australian wildflowers. It wasn't long before the two decided to move their family away from the hustle and bustle of Perth to the quiet country life of Mount Barker.

Located in the Great Southern Region of Western Australia — where visitors eager to see the best and brightest of the state's annual wildflower season flock each year — Mount Barker district is home to a remarkable variety of banksia species. "If you get a string and draw a 50km radius around our town of Mount Barker we have 24 endemic species. If you draw the same thing around any other town in Australia the maximum is 18, so we are the richest area for diversity of banksia species," Kevin says.

Back in Perth, the family had around a dozen banksia species crammed into their backyard, so when they first began developing their property on Mount Barker in the early 1980s they were eager to expand their collection. The property had a wide variety of soils: wet peaty swamps, sand, gravel, limestone and clay, which allowed for all different kinds of banksia to flourish. But it wasn't until the pair got involved with a citizen science project to atlas Australia's banksia species, that they made the ambitious decision to create the world's only complete arboretum of banksias — all 79 species.

Collecting the seeds

Collecting the seeds of each and every species became a family affair. "We took the kids out camping, we took them to the eastern states, we went hiking up mountains and we went to the snow country searching for banksia seeds. We had quite a few adventures. It wasn't too difficult at all," Kathy says.

But it hasn't always been an easy journey. For Kevin, the collection of the *Banksia plagiocarpa* was the Holy Grail. Commonly referred to as the 'blue banksia' or 'Dallachy's banksia' after John Dallachy, the man who first collected it, this particularly beautiful specimen is found on Hinchinbrook Island located just off the Queensland coast.

"We flew to Cairns, hired a car and got a boat to go across to the island, took our camping gear and we made our way through the rainforest and up a 1000m mountain to find it. It wasn't in flower but we knew what to look for and took the seeds back to Mount Barker," Kevin says.

"Here's a challenge: grow a banksia in cool, southern Western Australia that normally grows on top of a mountain in rock...we thought we had no chance. It really tested us. "We tried it in five different locations on the property and surprise, it grew best on the driest place on our farm,

a natural bit of understory bushland that we had in tough iron stone rock. That proved to us that we could grow every banksia."

There isn't a time of year that Kevin and Kathy don't have banksias in flower. "We have banksias from tropical north Queensland growing next to a rare one from the local Sterling Mountains and a desert one from Kalgoorlie next to one from Tasmania, all growing side-by-side. "We have 55 flowering in autumn, 40 in winter, 35 in spring and 20 in summer and they overlap."



(On the left) Kathy and Kevin Collins.

The Banksia Farm

Back in 2007, much to the surprise of Kevin and Kathy they were listed by Australian Travel Magazine as one of the top 100 "unknown and undervalued tourism destinations" in Australia.

Kathy and Kevin had first started welcoming people onto their property to see the banksias back in the early 1990s. "Once we got notoriety from having the world's only complete arboretum of banksia species, people then wanted to come and see them. We were reluctant at first, but after we could assure the safety of the banksias we went with it."

Soon enough, the couple's property was listed as a stop along the east-west coast wildflower tours. And they upped their game. "We started labelling the species and created maps. We learnt about aboriginal history and the fossils, which made up an introductory talk that eventually developed into a tour. We made it a more professional business."

But once Kathy and Kevin turned 70 last year, they closed the garden to general public visitation. House guests and study group members can still access tours by appointment.

A vital scientific resource

Despite that the property is no longer accepting large groups of tourists, Kathy and Kevin, who are leaders of the Australian Banksia Study Group, say that their arboretum is always open for science.

Kevin and Kathy feature in countless journal articles and books on banksias for allowing people to use their farm for research. Kevin was even the subject of an ethnographic study that examined whether "plant-based objects and living plants deepen human memory."

Recently, the couple have been asked to co-author a major reference book on banksias, as the current reference book is out of print and new species have been discovered. Only just last year a new species of banksia was discovered an hour and half from Sydney. Luckily, Kevin had already been growing it for years without realising that it was a separate species, so the couple's arboretum remains complete.

Over the years the Mount Barker Banksia Farm has been utilised for all different kinds of scientific studies. "They're one of the highest utilised plants for research in the whole of Australia because of their different root systems, their stature, fossil records and scientists use them to understand climate, DNA and disease. "We've currently got some students from Potsdam in Germany looking at the wood fibre follicles and how they open with certain temperatures."

Kathy and Kevin are pleasantly surprised about how far their business has come. "When we started people thought making a business out of these flowers was laughable but it's led to all sorts of different ventures."

CRAZY PLANT LADIES THROUGH THE AGES: Women Naturalists, Botanists, and Horticulturists Who Made History

gardentherapy.ca March 7, 2018 Stephanie

Crazy plant ladies are my favourite people. They (we) are so passionate about nature and that enthusiasm is contagious. Today I want to take a minute to acknowledge some of the amazing historical 'crazy plant ladies' whose love of botanicals influenced the way we view plants and the study of plants today. The women in this list are not well known (or at least not well known for their work with plants) but have made important contributions to the field of botanical sciences and changed the way we think about nature.

This is not to say that these brilliant women struggled with mental health or were labelled insane in their time! In case you didn't get the memo, Crazy Plant Lady is a badge now worn with pride by the many women who confess that they have an enthusiastic love for plants and nature.

Historically, the appreciation of nature was not considered to be a specifically masculine trait, so it was acceptable for women to collect, record, and draw natural objects. Although excluded from most scientific studies at a professional level until recently, botany and horticulture was seen as an acceptable hobby for women and so it became a way for them to become involved in science and research at a time when science was all but closed to women because of their gender.

Maria Sibylla Merian (1647-1717)



Merian was taught by her painter stepfather how to draw and paint and became very skilled in visual arts. She published a three-volume series of beautiful botanical illustrations called *Neues Blumenbuch*, which translates to The New Book of Flowers. The volumes were not presented as having scientific value but rather as artful design to be used by readers in embroidery, painting, and other arts and crafts. However, the precise drawings of delicate flowers with carefully detailed insects look like the work of a naturalist more than a designer.

Merian went on to focus on entomology. At a time when insects garnered very little scientific interest because they were seen as inconsequential at best and disgusting at worst, Merian became fascinated by insects and made it her mission to observe them.



Over her lifetime, she collected and observed the life cycles of 186 different insect species. In 1679 she published *The Caterpillars' Marvelous Transformation and Strange Floral Food*, a detailed study of the life cycle of butterflies. This was not an altogether new field of study,

but Merian was the first person to carefully observe the eating behavior of caterpillars and discovered many individual food plants that are necessary for different butterfly species.

In 1699 Merian went on a self-funded expedition to Suriname, where she observed and recorded many different plant and insect species then unknown to Europeans, and published her findings under the title *Metamorphosis insectorum Surinamensium*. Her work went on to influence many scientists, including Carl Linnaeus and Charles Darwin.

Anna Atkins (1799-1871)



In 1841, Atkins began using a camera, making her either the first or one of the first women photographers. Her interest in photographic images led to her use of the cyanotype photography technique to record images of plant life. She became enthralled by seaweed, collecting and drying specimens meticulously and then creating cyanotypes of each specimen. She published her seaweed cyanotypes in *Photographs of British Algae: Cyanotype Impressions* (1843). This is considered to be the first published book of photography.

Growing up, Atkins was very close to her father and they bonded over a shared interest in science. Atkins became skilled at scientific illustration and developed a fondness for observing and recording the natural world. She collected and dried various botanical specimens for her own interest, and later used these specimens to make "photogenic drawings," a way of creating photographic images using light-sensitive paper and light exposure.

Emily Dickinson (1830-1886)



Better known as a poet, Dickinson was also an avid naturalist in her own right. She was also extremely fond of gardening and the fern-and-flower filled glass conservatory that her father built for his daughters at their family home. Dickinson was actually known more for her skills in gardening and botany during her lifetime than she was for her poetry, and she studied botany at Amherst Academy.

Over the years, Dickinson collected over 400 plant specimens, pressed and identified, in her personal herbarium album. The original herbarium is kept in the Houghton Rare Book Library at Harvard University, but the entire album has been digitized and can be viewed online there.

Maxi'diwiac (1839-1932)

Maxi'diwiac, also known as Buffalo Bird Woman, was an Indigenous

Hidatsa woman living in North Dakota whose extensive gardening knowledge was transcribed and published by anthropologist Gilbert L. Wilson in the book *Buffalo Bird Womans Garden* in 1917.

The book contains an account of a typical year of gardening and cultivation in Maxi'diwac's life. It includes detailed descriptions of how Maxi'diwac and her family planted, cared for, harvested, and preserved beans, corn, squash, and more, as well as the importance of ceremony, music, and storytelling as part of the process of nurturing the garden. This record of Maxi'diwac's extensive gardening knowledge contributed greatly to the preservation and knowledge of traditional Hidatsa gardening and cultivation techniques. Many modern gardeners use companion planting in the vegetable garden, a technique outlined in Maxi'diwac's book and used by her community for many years.

Elizabeth Gertrude Knight Britton (1858-1934)



By Unknown – The New York Botanical Gardens; The LuEsther T. Mertz Library Vertical Files, CC BY-SA4.0.

Britton was born and raised in New York. She went to Hunter College and became an instructor there after she graduated. In 1885 she married botanist Nathaniel Lord Britton, and the two of them devoted their lives to the study and conservation of plants. She and her husband helped establish the New York Botanical Garden after a trip to England where they were inspired by a large public garden.

Britton was especially interested in bryology, the study of mosses, and published 170 papers on the subject throughout her lifetime. There is even a moss variety named after her: Bryobrittonia. She wrote on many other plants as well, particularly ferns and native plants, and by the end of her life she had published a whopping 346 scientific papers.

Later, she became active in the conservation of wildflowers and was one of the founding members of the Wild Flower Preservation Society of America, established in 1902.

Beatrix Potter (1866-1943)

Although she is most known for her 'beautifully illustrated childrens stories, Potter also collected and studied plant life. She always had an interest in collecting and drawing specimens of all sorts, but became particularly fond of mycology, the study of fungi. She was fascinated by the stunning colors and varied shapes of different fungi, and produced many detailed, hand-drawn studies of different species of fungus.



Potter even conducted her own research and proposed a new theory on the reproduction and germination of spores, which was not taken seriously in her lifetime because of her gender, but has recently become well respected by the scientific community.

Marjory Stoneman Douglas (1890-1998)

Douglas spent most of her long life in Miami, Florida, and became very fond of the Everglades. She worked as a writer and journalist to support herself. In 1947, she published her most famous book *The Everglades: River of Grass* and it was extremely popular immediately upon publishing. The book contains a detailed study of the ecology, history, and cultural influence of the Florida Everglades as well as a call to action to preserve the Everglades, which at that time were in danger due to agricultural and real estate development with no laws in place to protect the area.

In 1969, Douglas was still working hard to protect the Everglades and she founded the organization Friends of the Everglades and protested the proposed construction of an airport on the land. Her activism led to the proposed airport project being shut down.

In addition to her environmental activism, Douglas was a proponent for women's rights and encouraged women to become more involved in conservation, famously saying "It is a woman's business to be interested in the environment. It's an extended form of housekeeping."

Janaki Ammal (1897-1984)

Ammal was born in India where, growing up, she discovered a love for botany. She moved to Michigan to attend university, where she completed her doctorate degree in 1931 and became the first woman in the United States to earn a PhD in the field of botany.

She returned to India and became a professor of botany. Much of her work was focused on sugarcane plants, and through research and experimentation with cross breeding, she managed to discover a way to create a variety of sugarcane that could grow well in India and is widely cultivated to this day.

Ammal was also deeply interested in the healing power of plants and their cultural significance, and so she spent time traveling to rural parts of India in order to learn about folk medicines and lore, observing and recording the use of different plants by Indigenous communities in various parts of the country.

A gorgeous magnolia, *Magnolia Kobus Janaki Ammal*, is named after her as a reminder of her important contributions to plant sciences.

This is just the beginning.

This post is devoted to women whose contribution to the study of plants is lesser known or unexpected, and is by no means an exhaustive list of all women who made an impact on the world of gardening. That list would include hundreds of women and would have to be published as a very thick book. What women would you add to our list? Please leave their name and story in the comments section, and we will consider including them in our follow-up article that focuses more on gardening. We are also working on a series on women from around the globe who have made great contributions to gardening, so please share your favorites in the comments section as well.

CALENDAR

PLANT COLLECTORS FAIR

<http://www.collectorsplantfair.com.au/>



April 7-8, 2018

Long lost plants will be found and taken home to create beautiful gardens and indoor jungles.

The Old-school Flower Show will give you the chance to exhibit your homegrown blooms for fabulous garden related prizes.

Keep in touch with plant-loving friends, growers and experts.

So many great plants never make it into garden centres. They might be hard to propagate, or slow to grow, or otherwise unsuited to large-scale commercial horticulture or they may simply have fallen out of favour. For whatever reason they are rare and unusual in the commercial world, and it is these treasures that are celebrated at the Collectors' Plant Fair.

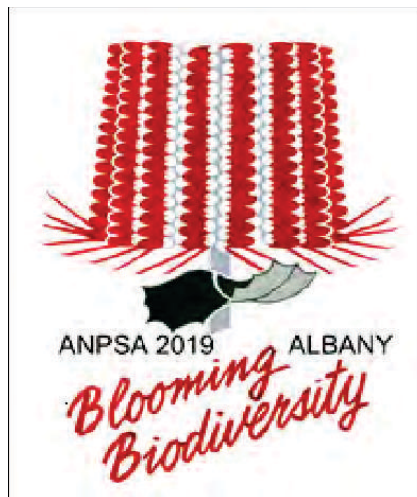
Hawkesbury Race Club, 1 Racecourse Rd, Clarendon NSW



BRIAN ROACH PLANT SALE & OPEN GARDEN

SUNDAY 15 APRIL, 2018
9.30am to 4.30pm

47 Eucalyptus Dr., Westleigh 2120
Free entry
0418115630 – bcroach@optusnet.com.au



Sunday 29 September 2019 to Friday 4 October 2019

Tours in the week before and week after

four pre-conference tours beginning in Perth and finishing in Albany.
four post-conference tours in the reverse direction
fifth pre-conference tour from and to Albany, 5 nights, to Ravensthorpe and Esperance
Ravensthorpe/Esperance tour repeated after the conference

Draft Programme

Sat 28/9 - Albany Wildflower Show last day
Sun 29/9 - short local trips, registration, AGM, welcome reception
Mon 30/9 - day trips
Tues 1/10 - talks and AJ Swaby lecture
Weds 2/10 - day trips
Thurs 3/10 - talks and dinner
Fri 4/10 - conference talks and farewell



Day trips during Conference

Monday and Wednesday devoted to day trips in the Albany region. Three itineraries .

The three itineraries repeated on the second day

You will be able to go on two of these, early registrants will be able to choose which two trips they go on.

Provisional itineraries for the four tours from Perth

Northern: Mt Lesueur NP, Hi-Vallee, Wongan Hills, Narrogin: **6 nights**

Eastern: York, Merredin, Kulin, Narrogin, Kojonup: **5 nights**

South: Dryandra, Narrogin, Kojonup: **1 night**

South Western: on the Swan Coastal Plain to Bunbury, and through the forests via Pemberton: **5 nights**

YES, KANGAROOS ARE ENDANGERED – BUT NOT THE SPECIES YOU THINK

theconversation.com March 13, 2018 Karl Vernes, University of New England

Do you know what kind of animal the mala, nabarlek, or boodie is? What about the monjon, northern bettong, or Gilbert's potoroo?

If you answered that they are different species of kangaroo – the collective term for more than 50 species of Australian hopping marsupials – you'd be right. But you'd be in the minority.

Include nearby New Guinea, and the number of kangaroo species jumps to more than 70. Kangaroos are so diverse that they have been dubbed 'Australia's most successful evolutionary product. But sadly, not everyone is aware of this great diversity, so most kangaroo species remain obscure and unknown.

This is brought into sharp relief by a new movie that premieres nationally this week called *Kangaroo: A Love-Hate Story*. The filmmakers set out to expose the kangaroo industry, painting a picture of gruesome animal cruelty, an industry cloaked in secrecy, and the wholesale slaughter of an Australian icon.

The film, which includes brutal footage, also includes the claim that Australia's kangaroos may be heading down the path of extinction.

The film has already screened in the United States and Europe to sold-out premieres, opening first in those places because they are important markets for kangaroo products. But foreign audiences also probably know less about Australia's major kangaroo species or the complexities of the kangaroo industry, and may perhaps be more easily swayed towards the filmmakers' point of view.

Many US reviews have been positive about the film, although one review described it as "frustratingly one-sided".

Most Australians, whatever their view on the kangaroo industry, would surely agree that if kangaroos are to be harvested, it should be done with minimal suffering. But are Australia's kangaroos really at risk of extinction?



The iconic red kangaroo. Large kangaroos are typically widespread and secure, unlike many of their smaller cousins. Karl Vernes

On mainland Australia, four species are sustainably harvested, largely for their meat or fur: the eastern grey, western grey, common wallaroo, and Australia's most famous icon (and largest marsupial), the red kangaroo.

The best scientific survey data, based on millions of square kilometres surveyed by aircraft each year, puts the combined number of these four kangaroo species currently at around 46 million animals. This is a conservative estimate, because only the rangelands where kangaroos are subject to government-sanctioned harvest are surveyed. There is almost as much kangaroo habitat again that is not surveyed.

Of the estimated population, a quota of roughly 15% is set for the following year, of which barely a quarter is usually filled. Quotas are set and enforced by state governments, with the aim of sustaining population numbers.

For example, of 47 million animals estimated in 2016, a quota of 7.8 million animals was set for the following year, but only 1.4 million of these animals (3.1% of the estimated population) were harvested. The wildlife management community is pretty much unanimous that the four harvested species are widespread and abundant, and at no risk of extinction.

Are non-harvested species at risk?

But what of the other forgotten 95% of kangaroo species? The conservation prognosis for these – especially the smaller ones under about 5.5kg in weight – is far less rosy.

The nabarlek – a small endangered rock wallaby from Australia's northwest – has become so rare that its mainland population in the Kimberley seems to have disappeared. It is now only found on a few islands off the coast.

The boodie – a small burrowing species of bettong – was one of Australia's most widespread mammals at the time of European arrival, but is extinct on the mainland and now found on just a few islands.



Gilbert's potoroo. Gilbert's Potoroo Action Group/Dick Walker

Gilbert's potoroo holds the title of Australia's most endangered mammal, clinging precariously to existence in the heathlands around Albany on Western Australia's south coast. One intense wildfire could wipe out the species in the wild.

Meanwhile, if the alarming increasing impact of cats on our northern Australian wildlife continues, recent modelling suggests that the northern bettong – a diminutive kangaroo that weighs barely a kilogram – will disappear. The list goes on: mala, bridled nail-tail wallaby, parma wallaby, woylie, banded hare-wallaby, long-footed potoroo, Proserpine rock-wallaby – all of these and more could slip to extinction right under our noses.

The culprits are the usual suspects: cats, foxes, land-use change – and our collective apathy and ignorance. Australia holds the title for the worst record of mammal extinctions in modern times, and kangaroos, unfortunately, contribute many species to that list.

The theatrical trailer for *Kangaroo: A Love-Hate Story* features a voiceover from a concerned kangaroo activist, who says: 'If Australians really knew what happens out there in the dark, they would be horrified.'

Indeed they might. But it's not just the treatment of the abundant big four kangaroos that are harvested (yet secure) that should attract attention. If we also look at the other 95% of kangaroo species that need our urgent attention, we might just be able to do something about their dwindling numbers - and the real kangaroo extinction crisis - before it's too late.