Women and plants

by Lauren Cabrera

Myth and literature are filled with associations between women, flowers and gardens. The goddess Flora is the embodiment of nature, and her name represents all plant life. Women traditionally gathered food and medicine from plants but the study of botany and medicine was largely associated with men. While some of these tropes live on today, women played a surprising role in scientific endeavours in the plant world throughout history.

Nature is often thought to have a powerful feminine energy. Its life-giving and nurturing characteristics are commonly associated with women, especially in Graeco-Roman philosophy—Flora the Roman goddess of flowering plants, fertility and blossoming. Let's not forget Mother Nature and Mother Earth. The trope about nature being personified as female lives on today. Some feminists consider this association to represent women as passive and therefore oppressed, but cultural ecofeminists contend that the trope is a powerful connection that should be embraced and celebrated.

Women have had a strong connection with plants throughout history. In traditional cultures, gathering of plants for food and medicine is considered women's work and western women in colonial times cultivated gardens, collected exotic species and enjoyed botanical drawing as a pastime.

While history remembers scientific study and taxonomy as a male pursuit and the majority of plant species are named by men, women have long played a role in the study of botany. A few scientifically-minded aristocratic women even used their positions of power to patronise and promote the practice of botany.

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Clockwise from top Early Nancy. *Photo – Eddy Wajon/Sallyanne Cousans Photography*; Dwarf Burchardia (*Burchardia multiflora*) collected by Georgiana Molloy 1854. *Photo – Specimens.kew.org/herbarium/K000356592*; WA Herbarium Collections team. *Photo – Andy Milner/DBCA*; Yam collection at Monkey Mia, a traditional food. *Photo – Tourism WA*
Inset Tufted trigger plant illustrations from Rica Erickson's 1958 *Triggerplants* book *Photo – State Library of Western Australia/b6180484_65*

Above Extracting edible parts of *Acacia* as bush tucker.
Photo – Stan Breeden/Lochman

WOMEN'S BUSINESS

Aboriginal people have lived in Western Australia for at least 60,000 years, with their land and sea providing everything they needed for a healthy life.

In traditional Aboriginal society, men and women had distinct roles, and gathering of water and bush foods was the responsibility of the women. They also hunted small animals, leaving it to men to pursue the larger species. Children also played an important role in hunting and gathering, helping their parents to collect bush food, watching and learning as they went.

Over their lifetime, the women would listen and learn, and come to know the seasonal cycles of plants and animals. They created bush medicines, taught by their grandmothers, aunties, mothers and sisters.

As they grew in age, so did their skills and knowledge, which they shared in turn.

BUSH TUCKER

Plants made up around 70 per cent of the traditional diet of Aboriginal groups in warmer parts of the country.

Fruits, seeds and greens were only available when in season, but roots could be dug up all-year-round. The women would replant important foods and tend to the ground by digging over the soil, burning to provide fertiliser, pulling out weeds and thinning out clumps. Their sacred Country was their garden and they tended it with love and respect.

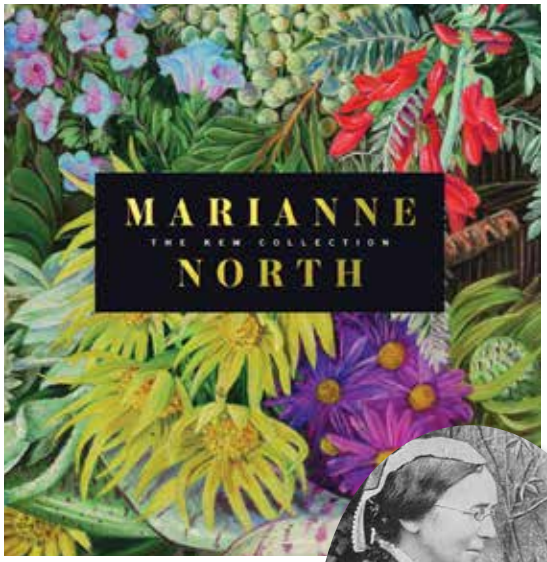
The women could identify native bush tucker plants and shared their knowledge of how to extract the edible parts of the plant or improve their edibility, for example soaking to remove toxins.

In south-western Australia, roots or underground plant parts were a very important part of the traditional diet, especially warrine yam (*Dioscorea hastifolia*). Native plants with small tuberous roots were collected for food, such as early nancy (*Wurmbea dioica*).

Southern fruits that bore heavy crops of red fruits were very popular, including those of the heath family (*Ericaceae*) and nitre bush (*Nitraria billardieves*).

MORE THAN FOOD

Plants had many other uses besides food. The women would use the leaves of the sedges, rushes and lilies to make baskets and mats. They soaked and beat the plants to free the fibres to make string. They used the bark of the trees to make buckets, dishes and even shields. The hard bark of the river red-gum was



"While history leaves us with the perception of science as masculine, women were very much involved in this process."

strong enough to make a canoe and old 'canoe trees' can still be seen today in the Kimberley with scars from where the bark has been extracted.

Nets were able to be made from some rice flower shrubs (*Pimelea* spp.) because the fibres were so strong. The fibres were called the 'bushman's bootlace' and were woven into fine nets to collect moths to eat.

The juice, crushed leaves and oils were used in medicine as ointments, teas and poultices. Native mints (*Mentha* spp.) were used as remedies for coughs and colds, and the tannin-rich gum from eucalyptus trees was used to treat burns.

Many Australian plants such as teatree, eucalypts, boronia and mints are rich in aromatic oils. These oils are very useful in treating respiratory illnesses and are commonly used today.

WE COME, WE CHART

During the age of imperialism in the 17th and 18th centuries, foreign plant specimens were being discovered in exotic lands and being taken to Europe to be studied. While history leaves us with the perception of science as masculine, women were very much involved in this process.

Over the course of the 18th century, amateur botany became a recreational activity for fashionable ladies. However, scientific societies and professional institutions were set up by men and did not allow access for women.

Colonial women in the newly 'discovered' land, would collect large quantities of seeds and plant, and send them back to Europe. Some upper-class women in Europe would collect and display the exotic botanicals for the purpose of scientific study or to put on display to the public.

In times before cameras, botanical drawings and accurate illustrations were integral to scientific study. By the 1760s, women who were taught this art put it to scientific use. One such woman was the renowned 19th century plant illustrator Marianne North who travelled alone across the world, including Australia, and created an incredible amount of botanical art. More than 800 of her works line the walls of the Marianne North Gallery at Kew, in geographical order of her travels.

Formal naming of plants began in 1753 and of all plant names published, fewer than three per cent have been published by female authors. However, in the Victorian era, women's botanical publishing grew, documenting plants discovered in foreign lands.

Above far left Warrine yam (*Dioscevea hastifolia*).
Photo – Eddy Wajon/Sallyanne Cousans Photography

Above left *West Australian Vegetation* painted by Marianne North in the 19th century.
Photo – Copyright of the Board of Trustees of the Royal Botanical Gardens, Kew

Above Cover of *Marianne North: The Kew Collection* book, documenting the 800 paintings she donated to Kew Gallery.

Inset above Marianne North painting at age 50, circa 1880.
Photo – Wikimedia Commons

Below Milkmaids (*Burchardia congesta*).
Photo – Eddy Wajon/Sallyanne Cousans Photography

Hear more from women who work with plants

Scan this QR code or visit Parks and Wildlife Service's podcast.

Top Plant specimen *Kennedia lateritia* collected by Georgiana Molloy 1854.
Photo – Specimens.kew.org/herbarium/K000279173

Above Miniature painting of Georgiana Molloy before leaving England in 1829.
Photo – Courtesy of the Bunbury family and in memory of their own daughter, Georgiana.

Top right Styleworts (*Levenhookia* spp.) plant illustrations from Rica Erickson's 1958 *Triggerplants* book.
Photo – State Library of Western Australia/b6180484_73

GEORGIANA MOLLOY

Georgiana Molloy is remembered as the first internationally successful female botanist in WA (see Georgiana Molloy: A remarkable woman, *LANDSCOPE*, Autumn 2002). She arrived in the Swan River Colony (now Perth, Western Australia) in 1830 and was among the small group of British colonists who founded the settlement of Augusta in the far south-west.

Much like her female friends, she collected dried flowers and enjoyed gardening. Her flower specimens were considered so accomplished that collector Captain James Mangles RN asked her to send him specimens of Western Australian indigenous plants.

Too often, the hazards involved in shipping specimens meant many didn't survive but Mrs Molloy's specimens were noted among English enthusiasts for their freshness and careful packing. Some even went so far as to consider them of superior quality to those of experienced male collectors doing the same, including James Drummond who was the 'government naturalist' in Perth until 1832.

Georgiana's life as a settler was one of hardship and tragedy. She lived in the colony for only 13 years and died soon after the birth of her seventh child at age 37.

She was referred to in several botanical and horticultural publications including John Lindlay's very successful *Sketch of the Vegetation of the Swan River Colony* although in Mangles *Floricultural Cabinet and Florists Magazin*e in 1841, as recognition for her *Pentandria monogynia*, she was referred to as simply 'a lady'.

RICA ERICKSON

Dr Frederika (Rica) Erickson is remembered as an Australian naturalist, botanical artist, historian, genealogist, author and teacher. As a school teacher near Toodyay in the 1930s, she studied the bush and wrote extensively on botany and birds.

While caring for four children and maintaining the family's farmland, she published her first book in 1951, the self-illustrated *Orchids of the West*. This was followed in 1958 by *Triggerplants*.

Dr Erickson was well known for her watercolour plant illustrations, which were especially noteworthy for their attention to detail, beauty and scientific accuracy. She was taught how to make sectional drawings of flowers and, with a second-hand microscope, a sketchbook, a small enamel paintbox, a magnifying glass and extremely fine paint brushes, she began painting.

Rica made an impressive contribution to botanical literature. Over her lifetime,

she authored ten books, co-authored four, was editor of twelve, and author or co-author of numerous papers and articles that have been printed in popular, scientific and encyclopaedic publications and also published several illustrated nature books.

VIVIENNE HANSEN

Vivienne 'Binyardn' Hansen is a Balladong Wadjuk Yorga woman from the Bibbulmun Nation, or Noongar people of the south-west of Western Australia. She was the first Indigenous member of the National Herbalist Association of Australia and has made a name for herself specialising in bush medicine, attending as a delegate to the 7th International Conference on Herbal Medicine.

As a child, she learned about traditional medicine from her family, and then undertook formal training at the Marr Mooditj Foundation. Today, she runs Binyaarns Bush Medicines and uses native plants and herbs such as sandalwood, soap bush, eucalyptus and wattle to make soaps, ointments, bath salts and tea bags, all collected from the Wheatbelt and Darling Scarp.

The mother of six was born in Brookton and she is renowned for her

Above Triggerplant (*Stylidium thesioides*).
Photo – Rob Davis

Top right Official opening of Rica Erickson Nature Reserve 1996. Rica is third from the left.

Above right Rica Erickson.
Photos – University of Western Australia Press as featured in Rica Erickson: A Naturalist's Life *by Rica Erickson*

Insets right *Orchids of the West* and *Triggerplants* by Rica Erickson.

Right Vivienne Hansen.
Photo – Binyaarns Bush Medicines

Bush medicine

Extract from* Noongar Bush Medicine *by Vivienne Hansen and John Horsfall

The Country of the Noongar people in south-western Western Australia stretches from Geraldton to Esperance, comprising an area of land of approximately 20 million hectares, with a coastline that covers 16,000 kilometres.

To deal with ailments, Noongar people used a range of remedies, which included medicinal plants, steam baths, clay pits, charcoal and mud, massages and secret chants.

- **Aching joints** were relieved with heated plant poultices, hot mud, or red ochre (wilgi or mirda) mixed with animal fat. Goanna fat was highly prized for the healing of painful joints.
- **Burns** were treated by smearing sap from certain plants, animal fat, saliva or mud on the affected parts.
- **Coughs and colds** were relieved by inhaling the vapours from the crushed leaves of specific plants, especially eucalypts. Steam pits and steam beds were also used for the treatment of colds.
- **Diarrhoea and constipation** were relieved by consuming small amounts of gum from a eucalypt.
- **Earaches** were relieved by pouring decoctions of certain plant parts into the ear canal.
- **Headaches** could be cured by inhaling vapours from the crushed leaves of some plants, by rubbing the crushed leaves on the head, by drinking decoctions of certain plants, by sleeping in the smoke from a fire, or by externally applying red ochre mixed with animal fat.
- **Poisons** that had been ingested were countered by chewing and swallowing charcoal.
- **Rashes** were relieved with heated plant poultices, hot mud, or the fat from the echidna and possum (koomoorl, goormoorl or goomal) rubbed on the skin.
- **Stings and bites** were treated by applying gum leaves that had been heated over fire.
- **Wounds** were also sometimes dressed with ochre or clay. Crushed gum from eucalypts would also be sprinkled on wounds to stem bleeding, and wounds were disinfected or cauterised with a burning stick. Specific types of soils were applied directly to open wounds or as poultices to retard infection. Wounds were also sometimes dressed with ochre or clay.

Top inset Vivienne Hansen's book *Noongar Bush Medicine*.

Above Illustration of eucalyptus leaves.
Photo – Adobe stock

Above right Barbara Rye in the Herbarium vault.
Photo – Andy Milner/DBCA

Left *Thomasia julietiae* named after Herbarium senior research scientist Juliet Wege.
Photo – Kelly Shepherd

palpable connection to Country and Indigenous tradition.

The increasing popularity of bush tucker and bush medicine means Vivienne often struggles to keep up with demand, but insists her business remains a cottage industry that is all about helping people, making them well or making them feel better.

Vivienne's clients include famous names such as Fiona Stanley, and footballers Imahra Cameron, Liam Ryan, Josh Kennedy and Nic Naitanui. She has co-authored two books published by The University of Western Australia—*Noongar Bush Tucker* and *Noongar Bush Medicine*.

BARBARA RYE

Dr Barbara Rye is another woman who has made a significant impact in botany in Western Australia. Her contribution is highlighted in an article written by Dr Kevin Thiele.

Extract from 'The amazing Dr Rye':

Barbara Rye grew up in Perth, at a time when there was more bushland than there is at present, and children roamed more widely. A wildflower-season bus trip in late teen years with her mother, consolidated a love of nature and a fascination with Western Australia's remarkable biodiversity.

Barbara was able to pursue her interest at the University of Western Australia, with undergraduate studies in both botany and zoology followed by a PhD under the mentorship of Associate

Professor Sid James, who inspired a whole generation of Western Australian biologists. As with others in the James lab, Barbara studied genetics, specifically chromosome evolution and reproductive biology in the family Myrtaceae.

Rye discovered her first new species, Darwinia capitellata*, which she segregated from the widespread* Darwinia diosmoides *based firstly on its different chromosome number, amply confirmed by morphological studies.*

Her first new species was followed by many more. A position at the Western Australian Herbarium since 1981 has given her ample scope to range across the rich flora of Western Australia. She was a co-author of the Flora of the Perth Region *and* Flora of the Kimberley*, produced a* Flora of Australia *revision of the large family Thymelaeaceae, and revised and described new species in many genera in a range of families.*

Barbara Rye has clearly made the substantial contribution to the discovery and documentation of Australia's species that was once denied so many talented women. She has named, alone or with other authors, about 310 taxa ranging from subtribes to varieties, including more than 240 species.

A 2019 updated analysis of records of all published plant names (from the International Plant Names Index) shows that Dr Rye is one of the all-time top-10 women authors of plant names in the world.

Barbara has recently retired, although undoubtedly her interest in botany and eye for detail will continue.

LIFELONG TRADITION

The Roman goddess Flora embodies nature and represents all plant life, and her name survives today as the botanical term for vegetation of a particular environment. Society has changed over the last few centuries as indeed have gender roles when it comes to science, botany and even home gardening.

Women continue this tradition today at the Western Australian Herbarium with strong contributions to botanical science and care of the large and precious collection of plant specimens.

Any connection to nature is a special one and it's a pleasant thought to know that any involvement with plants is part of a long and beautiful tradition, no matter your gender.

Above left Herbarium specimen *Melaleuca ryeae* named after Barbara Rye.

Above WA Herbarium collections team. *Photos – Andy Milner/DBCA*

Below DBCA's threatened flora officer Sarah Barrett at Ellen Peak in the Stirling Range. *Photo – Rebecca Dillon/DBCA*

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