A Quick Guide to Macadamia Identification

Macadamias belong to the Proteaceae family, a line of ancient flowering plants that arose when Australia was still part of Gondwana, 90-100 million years ago. Other well-known members of Proteaceae include Banksia, Grevillea and Hakea.

There are four Macadamia species, all are native to Australia and all are threatened in the wild.

Where to Look for Macadamias

Macadamias naturally occur in the coastal subtropical rainforests of north-east New South Wales and south-east Queensland, with a tiny outlier population in central Queensland.

Extensive clearing has caused the large-scale loss of wild macadamia, with many populations now scattered in fragmented rainforest remnants on public and private land.

Fortunately, the highly desired, edible nut produced by two types (species) of macadamia, meant that some of these macadamias were left standing when the rainforest around them was cleared.

The delicious nuts also led to planting of macadamias well outside their natural distribution, and they can now be found in urban backyards, bush blocks, old orchards, parks and reserves across Australia and overseas.

In the wild (below), macadamias can be difficult to pick out amongst the other rainforest trees. They can also look different from cultivated trees, are often multi-stemmed (below right) and produce far fewer flowers and nuts than cultivated trees.

What to Look for

Macadamia are generally long-lived, small trees, with green leaves all year around. They are often multi-stemmed rather than having a single trunk.

In their natural rainforest environment, macadamias look quite different from the large, dense, rounded trees familiar to many backyards and orchards.

Within rainforests, macadamias may have many trunks, relatively sparse leaves and few flowers, though trees receiving more light (such as through a forest gap or those growing on the edge of the rainforest) may have denser foliage and more flowers.

Identifying Features of Macadamias

There are four species of macadamia:

1. Queensland Nut (*Macadamia integrifolia*);
2. Rough-shelled Macadamia (*M. tetraphylla*);
3. Gympie Nut (*M. ternifolia*); and
4. Bulberin Nut (*M. janseniil)*.

The first three listed above have overlapping distributions and can be found in the same habitats; by comparison, Bulberin Nut is found only in a small area of central Queensland.

Key features for distinguishing macadamias are:

- Leaf shape and size;
- Leaf edge and tips;
- Flower colour; and
- Nut size and shell.

The table overleaf compares these features for each macadamia species.

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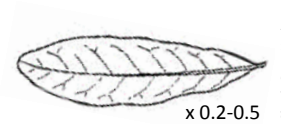
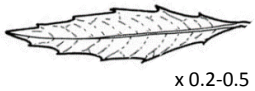
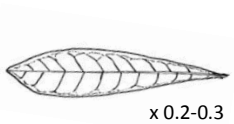
Common Name *Scientific Name*	**Queensland Nut** *Macadamia integrifolia*	**Rough-shelled Macadamia** *Macadamia tetraphylla*	**Gympie Nut** *Macadamia ternifolia*	**Bulberin Nut** *Macadamia jansenii*
Status[1]	Vulnerable	Vulnerable	Vulnerable	**Endangered**
LEAVES				
Leaves per node	usually 3(may be 2 or 4) 	usually 4 (can be 3 or 5) 	usually 3 	usually 3 
Leaf tips	rounded or pointed	abruptly rounded with stiff point	sharply pointed	pointed
Leaf edges	 x 0.2-0.5 Sketch: Gwen Harden	 x 0.2-0.5 Sketch: Gwen Harden	 x 0.2-0.5 Sketch: Gwen Harden	 x 0.2-0.3 Sketch: Gwen Harden
	smooth, wavy (mature trees) coarsely serrated (juvenile trees)	densely serrated no leaf stalk (petiole)	moderately serrated	smooth, wavy
New flush colour	light green  Photo: Catherine Nock	red to pink  Photo: Paul Donatiu	pink / pinkish-red  Photo: Paul Donatiu	green or pink  Photo: Liz Gould
FLOWERS				
Colour	cream  Photo: Paul Donatiu	pinkish-purple  Photo: Paul Donatiu	pinkish or cream  Photo: Paul Donatiu	cream-brown  Photo: Alison Shapcott
NUTS				
Shells	thick, hard, smooth	thick, hard, bumpy	thin, hard, smooth	thin, hard, smooth
Edibility	edible	edible	inedible / very bitter	inedible / slightly bitter
Size	 x 1	 x 1	 x 1	 x 1

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For more information

www.hlw.org.au/macadamias

www.environment.gov.au/biodiversity

www.wildmacadamias.org.au

References

[1]Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and Queensland *Nature Conservation Act 1992*.

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