

BUDAWANGIA*

AN E-NEWSLETTER FOR ALL THOSE INTERESTED IN THE NATIVE PLANTS OF THE NSW SOUTH COAST

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Aims: To connect those interested in the native flora of the NSW South Coast, to share up to date information on the flora of the region and to broaden the appreciation of the region's native plants.

Editorial

The hot spring weather began at the end of the first week of the month and has continued through much of the month, with drizzly rain and some good showers in the second half. The earlier rain and the warm spring season, topped off with rain this month, have seen the bush full of wildflowers in full bloom. There are also green paddocks all the way to Yass and beyond. I spent a few days in Mimosa Rock National Park during the latter part of the month – what a magic place. The geology along that coast has created what must be one of the most scenic places on the NSW coast. Well worth a visit of a few days, with coasts and rainforests to explore.

This edition includes a piece on the hibiscus family, well known to many people, particularly gardeners as many species are used as ornamental plants. Perhaps not so well known is that recently species from other families have been transferred to this family. Following a request from a reader, a piece on the vines in the family Menispermaceae has been prepared and appears herein. The mystery weed from last month is identified and Number 7 in the series on wetland plants are also included in this issue.

Rainforest botanist Gwen Harden, after many years of work with her colleagues, is about to release *Rainforest Plants of Australia - Rockhampton to Victoria* as a USB. This massive work will be the ultimate reference for rainforest plants in the above region and will make rainforest plant identification available to almost anyone. The technology allows a huge amount of information to be stored on a single USB and the concept will no doubt be transferred to other plant groups and other regions in future.

Thanks to Frances (Culburra) for pointing out the completely incorrect date in the last newsletter. Bass, Flinders and Martin toured the Illawarra coast in 1796, not 1889 as mistakenly stated last month; the gremlins at work!

I would be pleased to receive appropriate articles, however small, on interesting observations, new discoveries, plant name changes, etc., up to two A4 pages, including some photographs. Deadline is one week before end of each month.

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* *Budawangia* is a monotypic, endemic genus restricted to the Budawang Range on the western edge of the South Coast region. The genus was named by Telford in 1992; the species *Budawangia gnidioides* (Ericaceae) was previously *Rupicola gnidioides*.

The Hibiscus Family – Malvaceae

The Malvaceae is probably best known to most people by the large, colourful flowers of the tropical Hibiscus. The family contains many genera, however, and is worldwide in its distribution, containing around 2,000 species. The family is widespread in Australia, which has about 24 genera containing around 160 species. Recent changes in the taxonomic treatment of this and closely related families have resulted in the inclusion of previously separate families into the Malvaceae, although this may be somewhat controversial amongst taxonomic botanists. Such is the case with the Family Sterculiaceae, containing genera such as *Brachychiton*, *Lasiopetalum* and *Commersonia*. The family name comes from the Latin *malva*, the name derived from the word in ancient Mediterranean languages for a plant now in the genus *Malva*.

Species in our region include natives and weeds, as well as horticultural and other useful plants. The natives include the spectacular Native Hibiscus *Hibiscus heterophyllus*, which probably produces the largest flower of any native plant in the region. Other natives include Howittia *Howittia trilocularis*, Illawarra Flame Tree *Brachychiton acerifolius*, Straggly Lantern-bush *Abutilon oxycarpum* and the rare plant *Commersonia hermanniifolia* (syn. *Rulingia hermanniifolia*).



Modiola caroliniensis, a common garden and pasture weed.



Howittia trilocularis; an uncommon forest shrub, usually growing in gullies.



Hibiscus heterophyllus; a common small tree on the edges for rainforest in the Kiama area.



Abutilon oxycarpum; an uncommon shrub of dry forest on good soils.

Useful plants in the family include Cotton *Gossypium* spp., edible plants like Okra *Abelmoschus esculentus*, and garden plants such as *Hibiscus* spp., Chinese Lantern *Abutilon* spp. and Norfolk Island Hibiscus *Lagunaria patersonia*. Weeds include the mallows *Malva* spp., Red-flowered Mallow *Modiola caroliniensis*, Pink Pavonia *Pavonia hastata* and Paddy's Lucerne *Sida rhombifolia*, which featured in newsletter No 17.



Pavonia hastata is an uncommon exotic shrub.



Lagunaria patersonia, a tree occasionally naturalised in coastal areas.

Mystery Weed Answered

Emma (Mt Pleasant, Wollongong) quickly and correctly identified the weed in last month's issue as *Olea europaea* subsp. *cuspidata* (Oleaceae), the Wild Olive or African Olive. It is related to the edible olive, although this species has very small fruit of little culinary value.

Wild Olive is a highly invasive species in drier environments; it is particularly troublesome in Western Sydney. Locally, it occurs here and there on the coast on dry sites such as the rocky outcrops (old quarries) in Kiama and occasionally around Nowra and Milton.

The photograph at right shows the green, unripened fruit.



Family Menispermaceae

Peter from Kiama asked for some information on the vines in the family Menispermaceae following the article about *Cissus* in the August newsletter – so here it is. The family contains some 70 genera encompassing over 400 species, which are mainly found in tropical & subtropical regions. In Australia, there are 24 species in 13 genera, while New South Wales has seven genera, three of which occur on the South Coast. These species are readily identified by the distinctive shape of their leaves.

The scrambling Snake Vine *Stephania japonica* var. *discolor* occurs throughout eastern NSW, extending as south as the Eden area on the far south coast. This species occurs in Asia and other varieties occur in the south-western Pacific. Locally, the species is common in many types of vegetation, from beach dunes to rainforest and is the most common of the three species discussed here. The leaves are peltate (having stem away from leaf margin) and somewhat triangular in outline.



Upper leaf surface, *Stephania japonica*.



Lower leaf surface, *Stephania japonica*.

Round-leaf Vine *Legnephora moorei* is a large woody, rainforest vine that grows high up into the tree canopy, its presence often indicated by the large round leaves on the forest floor. The species grows in near-coastal areas as far south as the subtropical rainforest patches in the Milton area. The leaves are round and very large, up to 20 cm diameter.



Upper leaf surface, *Legnephora moorei*.



Lower leaf surface, *Legnephora moorei*; a dead leaf from the forest floor and the usual way of locating the species.

Pearl Vine *Sarcopetalum harveyanum*, a scrambling to climbing creeper, occurs throughout eastern New South Wales and extends south into Victoria. This vine is mainly found in and near rainforest. The leaves are heart-shaped, glossy, strongly cordate (heart-shaped) at the base and with seven prominent veins radiating from the stem.



Upper leaf surface, *Sarcopetalum harveyanum*.



Lower leaf surface, *Sarcopetalum harveyanum*.

Number of plant species on Big Island, Five Islands Group.

Further to the last newsletter, the following updates of the number of plant species on Big Island have been determined after completion of my surveys during the month.

	1928 [#]	1938	1989	2014
No. of native species	14	40	21	21
No. of exotic species	10	18	43	47

#. Not a comprehensive survey.

Wetland Plant No. 7 – *Mimulus repens*

Mimulus repens (Scrophulariaceae), known as Creeping Monkey-flower, grows on the muddy shores of swamps, estuaries and other wetlands among other wetland plants. The small but attractive blueish-purple flowers make it stand out in the warmer months. The flowers are sometimes white. The species is somewhat itinerant as it grows on the water's edge and fluctuating water level means that it may be present one day and gone the next. Plants are prostrate and mat forming, with long stems that root at the nodes. *Mimulus* is apparently a diminutive of the Latin *mimus*, 'actor in mimes', the reference quite unclear; *repens* means creeping, a reference to its growth habit.



Left. *Mimulus repens*, showing the creeping stems, small leaves and blueish flowers with their yellow centres.

Rainforest plants of south-eastern Australia – now available

Many readers will be familiar with Gwen Harden's guides to rainforest trees and vines. After many years of work these books have been greatly expanded, extended in their geographic coverage and placed into a digital format. Gwen has sent in the following notes.

After 13 years *Rainforest Plants of Australia - Rockhampton to Victoria* (Harden G., Nicholson, H., McDonald, B., Nicholson, N., Tame, T. & Williams, J., 2014) the USB is available. This interactive key and information system includes 1,139 species and over 12,000 images, the majority being taken by Hugh Nicholson. The key has 160 features and about 1,000 states (not including families). Features are based on habit of plant, bark (for larger trees), leaves, flowers and fruit, as well as geographic distribution. To assist with understanding and interpreting the features each has a linked screen outlining the individual states, and illustrated with line drawings or images and is linked to fact sheets of species that display that particular character. The advantage of an interactive key, as opposed to a key in a book where you MUST start from the beginning, is that the key can be commenced using whatever material you have, whether leaves, flowers or fruit, and with whatever features you are comfortable with using. The key is based on the information in the updated "Red Book" and "Green Book" by Gwen Harden, Bill McDonald and John Williams, published in 2006 and 2007 respectively, with expanded species descriptions, additional line drawings and explanation of key features by Gwen Harden.

As well as the key to the individual species there are introductory sections that explain how to use the key and what is covered in each fact sheet. There are also headings to the index (separated into scientific and common names), glossary, references, rainforest types, list of features used in the key and hints on identifying rainforest plants. Rainforest types are described with diagrams of structure, map of distribution and images from different localities. These sections can be accessed through the front page. Each fact sheet includes scientific name of the plant, common names, family, whether it is rare or threatened or an introduced species, description of diagnostic features and line drawings and a varying number of images.

Following the release of this key and information system as a USB, it will be modified by Identic (Lucid) into apps for smart phones and pads, available through the Google Play Store and the Apple App Store in 2015.

Rainforest Plants of Australia – Rockhampton to Victoria, the USB is available from the Gwen Harden Publishing web site at:

www.rainforests.net.au.

The RRP is \$100, but it is offered as a special web price for \$80 (posted).

