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The Janus Corner

Looking Back  **Looking Forward**

This occasional section within the journal surveys visions and achievements, often not on the main track of the developing biomedical sciences, but all relating to discoveries and developments of medicinals – both ancient and modern. What they have in common, in one way or another, is providing further background and glances around the edges of the core discipline of pharmacognosy, as it has been and continues to evolve within our times.

Medicinal Plants in Australia, Volume 3 – Plants, Potions and Poisons

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Traditional medicines have remained popular in many parts of the world and have in fact recently been regaining ground on allopathic medicine as they are perceived as being 'natural'. Many volumes have been written on plant based medicinal systems internationally. Australian Aborigines have a long history of using medicinal plants to maintain their health and well being prior to the arrival of European settlers. Despite this long history of medicinal plant usage and the unique nature of Australian plants, there is a notable absence of books dealing with the medicinal plants of Australia at a level accessible to both interested lay persons, as well as experts in the fields of botany and herbal medicine.

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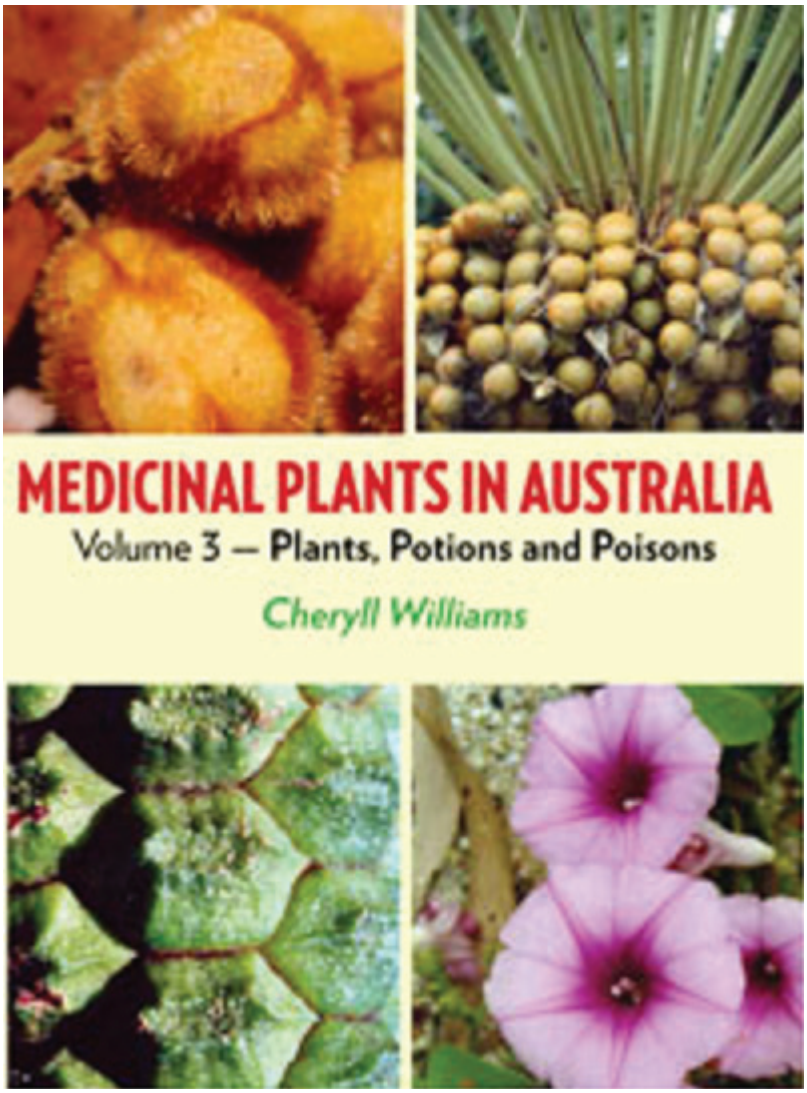
'Medicinal Plants in Australia, Volume 3 – Plants, Potions and Poisons' is an invaluable resource for anyone interested in complementary and alternative medicines, herbal medicines and Australian plants. This is the third book in a planned 4 volume series which already includes volumes on 'Bush Pharmacy', and 'Gums, Resins, Tannin and Essential Oils', with a further volume planned on 'Antipodean Apothecary'. The author Cheryll Williams is qualified natural therapist with more than 25 years experience in herbal medicine and acupuncture. She holds postgraduate qualifications in nutritional medicine, homeopathy and naturopathy. Her knowledge and interest in native plants and herbal medicines is evident in the detail and presentation of this volume.

The volume is divided into 11 chapters discussing different aspects of plant toxins, and their use and potential as medicines. The first chapter (Tales of Misadventure) outlines the problems experienced by early colonists when faced with finding edible plants, as well



as plants with medicinal properties, from amongst the myriad of species they had never encountered before. Whilst edible and medicinal plants were well known to indigenous Aboriginal inhabitants, for the early colonists, gaining this knowledge was often a case of trial and error. This led to some interesting discoveries such as the analgesic properties of stinging nettles, but also some less desirable findings. The author summaries much of the early botanical literature using examples of toxic plants to highlight the difficulties faced by early experimenters in Australia. Chapter 2 (The Art of Detoxification: Refining Plant Toxins) extends this theme and examines the methods used to remove/alter toxins so that various plants become edible.

Edible tubers of the family Convolvulaceae and their medicinal properties (and toxic affects) is covered in chapter 3. Plants of the genus Ipomoea, as well as Morning Glory's, and the fungus ergot are amongst the edible plants discussed. Chapter 4 also covers the medicinal properties and toxicities of edible plants, including sections on bush tomatoes and several varieties of potatoes.

Chapter 5 is about irritant poisons of plants of family Araceae (Arum lily family). Wild taro is amongst the examples used to outline the need for painstaking detoxification processes to remove toxic juices from plants, break down their irritant toxins and render them edible. Therapeutic properties of these plants are

also discussed. Caustic and corrosive agents (Chapter 6) can present a significant health problem for individuals experimenting with new plant species. Toxic 'bush tucker' containing caustic/corrosive compounds are examined using examples such as Australian cashew nut. Australian cashew is likely to have medicinal properties due to its taxonomic relationship with Indian marking nut (a plant with multiple well established medicinal properties) and the author highlights various ideas for future pharmacognosy research. Similarly, the mango tree is also highlighted for its therapeutic potential.

A very different potentially beneficial use of plants (as foaming fish poisons) is covered in Chapter 7. Numerous toxic plants (including wattles) are described and their medicinal potentials, as well as their toxicity, are discussed. Chapter 8 extends this theme, examining ichthyotoxins (fish poisons) of the Fabaceae family, with an emphasis on genus's Derris and Lonchocarpus.

Ferns and cycads are the focus of chapters 9 and 10 respectively. The author examines the toxicity of these classes of plants and highlights there therapeutic potential through specific examples. The cycad chapter is particularly interesting, discussing a group of plants seemingly left behind by evolution. Interestingly, Australia is an important region for cycad biodiversity, containing approximately 25 % of the world's cycad species. The ways in which the cycads have survived from prehistoric times up to modern day is examined. Adaptions, including those allowing cycads to survive insect attack and fire are discussed, as are the toxicity and medicinal properties of specific species. Finally, chapter 11 describes plant neurotoxins. As many cycads are known to contain neurotoxins, they are again used as examples in this chapter. Marine neurotoxins from cyanobacteria, shellfish and puffer fish are also described. Many plant species also contain cyanide so the importance of cyanide containing plant species is also discussed.

As well as providing a wealth of information on toxic Australian plants, great care has been taken in the presentation of this volume. Numerous colour photographs are included throughout the book showing the reader exactly what the plants discussed look like. With its mixture of visual appeal and interesting discussion, this book should appeal to a wide audience including complementary and alternative health practitioners, botanists and interested lay persons. From my point of view as a research scientist, the book highlights plants with medicinal potential and will aid in directing Australian medicinal plant research into the future.