

Preface

This volume of the series *Medicinal Plants of the World: Chemical Constituents, Modern and Traditional Medicinal Uses* contains information on 16 plant species and follows the same format as volumes 1 and 2. Some of the plants discussed in volume 3 may be considered controversial in their classification as “medicinal.” However, the Paracelsian dictum that “sola dosis fecit venenum” has been appreciated since ancient times, and throughout the ages many highly toxic materials used for lethal purposes have also found applications in modern medicine. It has been recognized that plants contain substances that are either harmful or toxic. However, it is wrong to think that there are plant toxins that are known or that are likely to have adverse effects on any and every form of life. A common feature of most toxic plants is that they are also known for their curative properties, and although they may provide the cure for an individual’s disease at one dose, they may cause the death of the same individual at another.

Poisons are widespread in plants, and humans have tried to either get rid of them or convert them to their own advantage. By their very nature, poisons are biodynamic substances because they affect, or are intended to affect, the functioning of the victims’ body. This also means that they have been, and are, important sources of medicine. With such potentially dangerous substances, it also means that care in medication is essential, and it raises the question of the relationship between the toxic dose and the therapeutic dose. For full advantage to be taken of their properties, a combination of reliable sources of materials and effective methodologies is required to enable not only isolation of the substances responsible, but also the investigation of their mechanisms of action. As more sophisticated methods are evolved to elucidate their chemical and pharmacological natures, it will be possible to target more precisely the use of these substances as possible templates to produce medicinal agents.

I am very grateful to a number of individuals for their valuable cooperation in this work. I owe sincere appreciation to Professor Ron Olowin of St. Mary’s College of California for granting me permission to use his photograph of *Plantago ovata* and Mr. Gary Monroe of Reno, Nevada for sharing his picture of *Larrea tridentata*.

In work of this nature there is always room for improvement. Suggestions from readers are welcome and will be gratefully received.

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