

larly, this book will be helpful for those who plan to use genomic sequences for designing suitable experiments in the area of metabolic and gene-regulatory networks. Overall, the book is highly recommended not only for students of bio-informatics but also for those biologists who plan to use computational methods.

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The Last Sorcerer – Echoes of the Rainforest. Ethan Russo. The Haworth Integrative Healing Press, An Imprint of The Haworth Press, Inc, 10 Alice Street, Binghamton, New York 13904-1580, USA. 2002. 368 pp. Price not mentioned.

Those who have visited tropical rainforests, even briefly, and seen its people, may never stop pondering over the question, 'how do these people lead healthy lives given the evidently harsh environmental conditions that the ecosystem provides?' This question becomes a lot more compelling to those who have experienced the rainforests of tropical America. Here the rainforest ecosystem is so extensive, often fragmented only by rivers. Isolated on these fragments and completely disconnected from each other and modern civilizations, several human communities have survived over millennia. The survival of these human communities has been primarily the result of their thorough knowledge of the ecosystem, the many components of biodiversity therein, and their value as food and medicine. It is this 'secret knowledge' that ethnobiologists world over are rather desperately trying to understand, document and exploit for the benefit of mankind.

Whereas there are a number of published documents and unpublished diaries written by traditional medical practitioners, early explorers, anthropologists and ethnobiologists on indigenous knowledge, culture and medical practices, there are few authentic accounts of the subject published by qualified doctors who practice Western medicine. The book under

review is one such publication, written as a novel, by an American neurologist, Ethan Russo. The author's interest in ethnobotany has taken him on a number of expeditions through the tropical American rainforests; and has also led to publications on psychotropic herbs and their therapeutic potential.

The story is of a medical doctor Abravanel's sabbatical to the Peruvian rainforest, to 'rejuvenate his spirit and learn about indigenous medicinal and shamanic plants'. Abravanel undertakes his study in the Amazon Jungle Centre – a research-cum-eco-tourist facility established by a businessman. The author brings an interdisciplinary focus to the novel by creating characters with varied research interests. Using these characters and their interaction with the medical doctor, the author lucidly portrays the flora and fauna of the Peruvian rainforests. The detailed explanation of the methods and tools each scientist uses in his study is certainly of interest to those who seek to know how field-based research is undertaken. There are, of course, certain sections that seem to reiterate the stereotypes that we have of *shamans* and local tribals, which the author uses to make the story interesting.

It is Abravanel's interactions with the local *brujo* or sorcerer and the *shamans*, Kuyuvi and Pikoro that discuss the ethnobotanical aspects of the story. The use of certain plant-based hallucinogens to 'cure', the accompanying rituals, music and invocation to spirits remind us of some of our own traditions! The note of caution that the *shaman* gives Abravanel that these sacred potions are to be used only in the presence of an experienced *shaman* who can guide the imagery (hallucination) reveals that the practitioners are fully aware of the properties of the plants. The gourmet's meal that the doctor enjoys during his stay at the centre is used by the author to describe the range of plants and animals that are used by the local tribals as food. In fact, a visit to the local shandy by Abravanel illustrates this.

The book is divided into four sections, including 28 chapters. In addition, there is an appendix that provides two dictionaries besides a general glossary of terms (including Spanish, Australian and English). The first is an Amerindian to English dictionary and the second is an ethnobotanical dictionary that includes specific details of the common and sci-

entific names of all the plants discussed in the book and their known uses.

On the whole, the book contains an authentic treatment of the subject. For those who are averse to reading hard science, Russo's novel would be ideal and as the comprehensive bibliography suggests, it is well researched. It may be a good venture for some of our own medical doctors and novelists to undertake, given the number of traditional medicinal practices distributed throughout India.

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The Social Biology of *Ropalidia marginata* – Toward Understanding the Evolution of Eusociality. Raghavendra Gadagkar. Harvard University Press, 79 Garden Street, Cambridge, Massachusetts 02138, USA. 2001. 368 pp. Price: US \$90.

A relevant question that I have often heard is 'What are the possible topics of biological research that can best be addressed by Indian researchers (i.e. something worthwhile, yet not requiring prohibitively expensive laboratories)?' In the late fifties and early sixties, Haldane asked and answered such questions, but I had my doubts. Today, I could reply, 'Follow the lead of *Ropalidia*'. Yes, in the story of 'my adventures with *Ropalidia marginata*' Gadagkar has shown how 20 long years of diligent observation on a lowly wasp, an easily available item of our rich biodiversity, coupled with an introspective mind can shed light on fundamental problems of biology. An absorbing story it is, full of twists and turns, and the two most salient features are: (i) a naturalist's insatiable curiosity that pries open all aspects of the wasps' life history; (ii) the evolutionary perspective of post-1964 (Hamiltonian) Darwinism.

Relevant to this context is also the Watson–Wilson controversy. The famous author of *The Double Helix* had also pooh-