

Responding to Bioprospecting: from biodiversity in the South to medicine in the North. Hanne Svarstad and Shivcharn S. Dhillion (Eds). Spartacus Forlag As, Oslo. 2000. Pp. 220. \$ 17.95. ISBN 82-430-0163-8

Responding to Bioprospecting, provides an even handed look at the cultural, economic, and environmental issues surrounding ethical and unethical biodiversity prospecting. This volume is poignant in its anecdotes and discussions that range from issues of biopiracy, to what is needed for truly ethical bioprospecting in Africa. As one moves through the fourteen essays which immediately offer a crash course in "bioprospecting 101" and beyond, the reader will be immersed in not just the polarization that influences this issue, but many of the historical nuances that come to bear on bioprospecting. The volume begins with a powerful "picture this" example, when on vacation in Norway in 1969, a Swiss scientist collects a few soil samples. After some 30 years, including 11 years of research and development, that hand full of soil has yielded a pharmaceutical company US\$ 1.2 billion in sales (page 9).

Part one of *Responding to Bioprospecting* comprises the first seven chapters which provide an in depth examination of the origins of bioprospecting. The first section is silent in its analysis of the differences between bioprospecting and biopiracy. In addition, the issues confronting the commercialization of medicinal plants and concerns regarding the phytomedicine industries use of "best practices" are covered. Part two of the volume offers examples of engagement between the scientific community and traditional healers. Of particular interest are Chapter Eight's insights on a working model of bioprospecting reciprocity in Mali. The final section covers Chapters 12 through 14, which discuss legal issues that hamper denied development nations in their efforts to be equal partners in bioprospecting. While the essays in *Responding to Bioprospecting* are diverse and objective, missing is the voice of bioprospecting opponent Vandana Shiva. While Shiva is often cited in the articles, she does not have a contributing essay in the volume. Shiva would enhance *Responding to Bioprospecting* had it included a piece by her.

It remains to be seen whether or not there can be an ethical and fair engagement within the bioprospecting arena. Yet, in *Responding to Bioprospecting* the reader is presented with the often-used model of INBIO and Merck & Co in Costa Rica. There is a great deal of success and technological exchange in this particular arrangement that can be applied to other NGO/Industry agreements. But it should be understood that the Merck/Costa Rica deal is essentially a contract between a government and an industry leader and that bioprospecting takes place on governmental land reserves, hence "no work in agricultural lands or areas under management of indigenous groups" takes place (page 54). Similar situations rarely exist elsewhere. Instead, most bioprospecting efforts take place in indigenous homelands.

Although many indigenous groups have failed to benefit from past bioprospecting efforts, the volume does provide some examples of current or recent agreements in which indigenous groups and ethnic minorities cooperate with bioprospectors. An example of this cooperation appears in Chapter 10, which examines the relationship between a rural community and Shaman Pharmaceuti-

cals. This chapter illustrates the trial and error process that many traditional communities currently find themselves in when dealing with bioprospecting interests. The question that often arises is, can these communities withstand this trial and error process, and is it ethical to have unwitting communities enduring a process that can be avoided? History shows that if equitable arrangements are not agreed upon, communities find their own traditional knowledge becomes contested.

No single essay in *Responding to Bioprospecting* ties together all the variables that keep the usually one-sided bioprospecting structures in place. But by the book's end it is very apparent that this collection outlines the bi-polar positions on the issue of bioprospecting, and it details many of the undercurrents and inner-workings of this industry. To this volume's credit, *Responding to Bioprospecting* provides thorough coverage of biodiversity conservation issues. Unfortunately, it does not provide enough material regarding issues such as the loss of cultural diversity. Far too little attention is given to the cultural alterations that belie the aftermath of bioprospecting be it ethical or not. Also missing from the volume is examinations of the role advances in technology have played in making bioprospecting a lucrative industry in the last decade, and the pressure this these technological advances have on denied development countries. The failure on the part of the editors to include an essay on the role of bioprospecting and its links to health issues in both the nations of the North and South should not be seen as blind omission. Such oversights are often corrected in second editions. Given the broad array of topics covered in this volume, *Responding to Bioprospecting* is well worth the read for ethnobiologists interested in this topic.

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