

Editorial

In his talk to IBSAR members (8 May 2003), Almo Farina introduced a fresh and challenging view of biodiversity, namely the perspective of landscape ecology. Fresh, because as a perspective it extends beyond plant resources to embrace the landscape as a whole. Challenging, because it places socio-cultural aspects of bioprospection at the center.

As a landscape designer, I am surprised to find landscape not uncommonly overlooked by scientists. Farina arguing from the standpoint of the ecological sciences asserted that in the Mediterranean, a landscape perspective is central to the sustainable development of biodiversity and the management of natural resources. Landscapes are the product of natural and cultural processes, and in the landscape mainly cultural, i.e. human-made/modified. Mediterranean rural cultural landscapes are the outcome of centuries of the interaction between natural (land and environmental resources) and human (stewardship) processes. It follows that an understanding of the prudent management practices and vernacular know-how of the local communities, the custodians of our wildlife resources, is a necessary part of building towards a sustainable future.

Landscape then serves as the physically tangible dimension of biodiversity, one that serves as a medium for a holistic approach that is integrative of nature and culture. Landscape also serves as a reminder of the historical role of local communities and the need to integrate socio-cultural needs and aspirations as integral to bioprospection.

Jala Makhzoumi

MARK YOUR CALENDAR!

(As if you had nothing else to do?!)

June 17- 18: Workshop "Legislation and Biodiversity Opportunities: The Costa Rican Experience"

A two day workshop in which the Minister of Environment of Costa Rica and a representative from InBio will exchange with Lebanese decision makers, lawyers and IBSAR members information and experiences on biodiversity in relation to legislation, research and economic opportunities
(More on the Web:
<http://www.inbio.ac.cr/en/default.html>)

June 24: Retreat: Strategic Planning for IBSAR, from 3:30pm-9:00pm - Coordinated by Dr. K. Abdallah
(Invitation and schedule to follow).

June 30 - July 1: Workshop: "Intellectual Property and Biodiversity: their impact on Legislation and Agricultural development".

A two day workshop in which Drs. J. Dodds and A. Krattiger from SWIFFT (Strategic World Initiative for Technology Transfer)

at Cornell University will address the impact of Intellectual property and biodiversity on Legislation and Agriculture Development. SWIFFT is an integrated service provider and research facilitator, leveraging science and technology to improve the lives of rural people through increased agricultural productivity and trade in technology, agricultural products and genetic resources

(More on the web:
<http://www.swifft.cornell.edu/>).

Meetings, contacts & Seminars

IBSAR meetings. IBSAR meetings are scheduled every 2 weeks starting February 27, 2003.
(*Schedule of speakers on the web*)

Seminar of 8 May A. Farina (an Associate Professor of Ecology in the Faculty of Environmental Sciences, University of Urbino, Italy) gave a presentation entitled: " **An Ecosystem approach to Biodiversity** " in which he described the relation between ecology and biodiversity, the strategic approach for the integration between ecology and economy and the importance of cultural landscape.
(*Minutes of meeting and presentation on the web*).

Seminar of 22 May. N. Najat and K. Bouhadir gave a presentation entitled: " **Defining chemical Profiling** " in which they described the extraction and profiling process, and the possibility of compiling information on the chemical status of each plant in a chemical library which would be unique in the Middle East. They also raised issues related to the future prospects of IBSAR.
(*Minutes of meeting and presentation on the web*).

Seminar of 28 May L. Musselman (Mary Payne Hogan Professor of Botany, Department of Biological Sciences, Old Dominion University Norfolk, Virginia) gave a presentation entitled: " **Dichogamy in Hydnora: Sex lives of the strangest plants** " in collaboration between IBSAR and the department of Biology

Contacts. N. Hwalla and S. Talhouk met with a Lebanese landowner, Mr. Wissam Abou Ezzidine, and discussed prospects for the cultivation of medicinal plants and possible of collaboration with IBSAR.

Contacts. N. Hwalla, N. Saliba, and S. Talhouk met with a Lebanese investor, Mr. Pierre-Marie El Khuwairy, who is

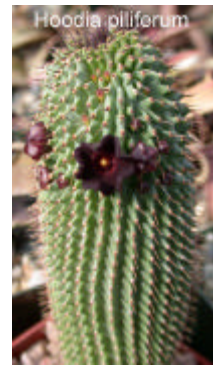
interested in launching medicinal or herbal products to market and discussed prospects of collaboration with IBSAR.

Bioprospection: Good news for some bad news for others

Below are two reports discussing the prospects of Hoodia plant native to southern Africa

San to Benefit From Medicinal Plant (<http://allafrica.com/stories/200303260497.html>)

Slices of the hoodia plant are traditionally chewed by the San to stave off hunger and thirst on long hunting trips. The plant now looks set to deliver a blockbuster anti-obesity drug to Pfizer, as well as license fees and royalties to the local institution, which succeeded in isolating the hoodia's active ingredient, the Council for Scientific and Industrial Research (CSIR).



Remarkably, the San people look set to benefit too. Earlier this week, the San Council and the CSIR announced the details of a landmark benefit sharing agreement that would see San communities across southern Africa reap immediate financial gain. More is to come should the hoodia-derived drug, dubbed P57, be successfully taken to the market.

Under the terms of the agreement, the CSIR will pay the San 8% of all milestone payments it receives from its UK-based licensee Phytopharm a sum that the head of the council's biochemtek division Petro Terblanche says will run to between R8m and R12m over the next four years. Payments will be made into a trust, with the first one backdated to March 2002.

Like any drug in development, it's possible that P57 will come unstuck in clinical trials, or be superseded by other drugs. But the chances of this happening seem slim as P57 has effectively been tested in humans for centuries. It is also likely to have few of the side effects that typically plague slimming products as it is derived from a natural source.

If the drug does indeed go to the market, which is not likely before 2008, the San will also receive 6% of all royalties paid to the CSIR by Phytopharm.

There were smiles all round as the deal was signed in Andriesvale in the Northern Cape on Monday, but the two parties have trod a bumpy road to get thus far.

Two years ago, the San and the hoodia made international headlines when it first became public knowledge that Pfizer, the company that brought the world the impotence drug Viagra, had paid 21m to Phytopharm for the development rights to P57. Phytopharm had previously bought those rights from the CSIR.

Relations between the San were strained, with talk of legal action.

But a year later, both sides acknowledged that neither could have got anywhere without the other the San did not have the scientific know-how to isolate and patent the appetite suppressing compounds within the hoodia and the CSIR had used San knowledge handed down from generation to generation and agreed to sit down and negotiate a benefit-sharing deal.

In the absence of guiding legislation, that proved no easy task.

Nevertheless, the San and the CSIR have struck an agreement that not only tackles the difficult issue of assigning value to each stage of the production chain from field to pharmacy shelf, but also grapples with the difficulties of sharing benefits amongst a group of

people the Khomani, !Xun and Khwe scattered across southern Africa.

The process has been closely watched by the science and technology department, which is still developing a national policy on indigenous knowledge. That policy is due to be made public in June and will guide the development of legislation on the emotive issue of benefit-sharing.

Arts, Culture, Science and Technology Minister Ben Ngubane says one of the main challenges in this domain is the contrasting nature of traditional knowledge, which is communityowned and handed down from generation to generation, and intellectual property rights, which views knowledge as being owned by an individual or company.

CSIR president and CEO Sibusiso Sibisi believes that SA, with its rich botanical heritage, has the capacity to become a world leader in the field of "bioprospecting" mining vast economic and social benefits from plant resources.

It is a domain that the CSIR is clearly investing in. Last year it launched a bioprospecting initiative that brought together several research institutions and universities, and last month it signed a benefit sharing agreement with a committee of traditional healers for drugs derived from indigenous plants.

According to Terblanche, the institution is now in negotiations with Phytopharm to develop a plant-derived drug for respiratory illnesses.

For your precious contribution to this invaluable newsletter, including the editorial section contact M. Daouk at me11@aub.edu.lb Submission deadlines 20th of each month.

Sharing the Crumbs with the San
(<http://www.biowatch.org.za/>)

The appetite suppressant, code-named "P57", is derived from a species of *Hoodia*, a succulent plant indigenous to southern Africa and long used by the San to stave off hunger and thirst. Active constituents of the plant have been patented by the CSIR, which learned of its potential through ethnobotanical publications. In 1998, the CSIR signed a licensing agreement for the further development and commercialisation of the product with Phytopharm, a small British phytomedicine company. Pfizer, the US pharmaceutical giant, then signed a deal with Phytopharm to develop a prescription drug .

Recently, agreements for the commercialisation of *Hoodia* had proceeded apace without acknowledgement of the contribution of the San, resulting in a high-profile case followed throughout the world reinforcing popular notions of "biopiracy" by large pharmaceutical companies. In 2002 this resulted in a Memorandum of Understanding between the San and CSIR formally recognising the San as originators of traditional knowledge associated with human use of *Hoodia*, or *xhoba* as the plant is locally known.

A concrete deal to share financial benefits was struck between the two parties. The CSIR will pay the San 6% of all royalties Phytopharm receives for product sales, and 8% of all milestone payments received when certain performance targets are reached over the next three to four years while the product is being developed.

While this agreement must be heralded as a historic breakthrough, certain concerns impede a wholehearted endorsement. Most notably, the San will receive only a fraction of a percent – less than 0.003% - of net sales. The San's money will come from the CSIR's share, while profits received by Phytopharm and Pfizer will remain unchanged. The San, in other words, will receive only a

miniscule sliver of a large, well-iced cake. Not only are Pfizer and Phytopharm exempt from sharing their king-sized portions, but also are protected by the agreement from any further financial demands by the San. Moreover, the agreement explicitly prevents the San from using their knowledge of *Hoodia* in any other commercial application.

Additional worries include the fraught questions of administering the funds, of determining beneficiaries and specific benefits across geographical boundaries and within different communities, and of minimising the social and economic impacts and conflicts that could arise with the introduction of large sums of money into impoverished communities. A critical moral dilemma relates to the patenting and privatisation of knowledge. In communities such as the San, the sharing of knowledge is a culture and basic to their way of life. The patenting of active compounds of *Hoodia* by the CSIR runs counter to this belief, yet brings with it greater financial returns – and higher risks – than the commercialisation of a non-patented herbal medicine. Bringing these two worldviews of intellectual property together is no easy task and raises fundamental ethical questions for a future working relationship, more especially if research continues to be focused on diseases of the rich such as obesity.

Fund Raising

Funds received!

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Proposals Submitted

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Publications from IBSAR

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