

Plains Apache Ethnobotany

By Julia A. Jordan. 2008. University of Oklahoma Press, 2800 Venture Drive, Norman, Oklahoma. 212 pages. 34.95 USD. Cloth.

Plains Apache Ethnobotany is a delightful book by retired anthropologist Julia A. Jordan. Based on graduate fieldwork she conducted in the mid-1960s in Oklahoma, the book is dedicated to the memory of the Apache elders she and other students worked with during that period – people with whom she developed a working relationship “interlaced with humour and laughter,” as well as apparent mutual respect and cooperation.

The introduction, where Jordan describes the fieldwork and portrays the elders, is one of the most engaging parts of the book. She introduces Ray Blackbear, who was raised by paternal grandparents from whom he learned the history and folklore of the Apache, as well as details on finding and using native plants. He used to tease Jordan unmercifully about her pronunciation of certain Apache words. Louise Saddleblanket, the daughter of a respected Apache medicine man, pierced the author’s ears with a long, carefully selected prickly pear cactus thorn.

Fred Bigman, who lived near the students’ quarters, would never fail to arrive at 7:00 a.m. for his 8:00 a.m. interview, sometimes accompanied by his wife. Sitting quietly in the kitchen, smoking, drinking coffee, and making small talk, he gave the impression that watching the field school students wake up was a favourite pastime. Rose Chaletsin, a woman of property and stature, was an accomplished storyteller who agreed to tell some of her stories during the summer field season, even though the traditional storytelling period is winter. When the recorded stories were played back, the author reports, Chaletsin laughed heartily. Those personal touches set a pleasant tone for the rest of the book.

Part One, “The Plains Apache,” includes a chapter on Plains Apache history and culture, including the earliest known history of the tribe, nineteenth century developments, the reservation and allotment periods, and finally the twentieth century. The chapter on the Plains Apache plant world was particularly intriguing. I discovered, for example, that plants were not conceptualized by the Apache as distinct entities and that the Apache world view did not divide nature into, for ex-

ample, animal, vegetable and mineral kingdoms. The Apache language, writes Jordan, has no equivalent for the English word “plant.” The Apache also conceived of plants as existing in pairs: the “real” plant and an imitation or imitations that resembled the real plant but did not carry its particular properties. Wild bergamot (*Monarda fistulosa*), for example, has imitators within members of the same genus (*M. punctata*, *M. citriodora*) that do not carry *fistulosa*’s highly valued scent.

Part Two, “The Useful Plants,” includes chapters on plants used for food, ritual and medicine, material culture and firewood, and personal care and adornment. What struck me about these chapters was the Apache names for these plants – names that reflect practical knowledge or humorous perception. Wild onion, for example, is called “horses won’t eat it” in Plains Apache, while black samson echinacea is named “medicine makes you numb” because it produces a numbing effect on the mouth tissues when chewed. The ram’s horn or unicorn plant is referred to as “old lady’s toenail,” while the puffball is called “coyote penis.”

In some of the previous paragraphs I have used the past tense to echo Jordan’s writing, as well as her assertion, in the concluding chapter, that although this particular ethnobotany is perhaps incomplete, it would be impossible to replicate now because the elders she worked with have passed away. With the loss, in 2008, of the last individual who could speak the language with any fluency, these “custodians of the language and traditional culture” have, in essence, died out. Nevertheless, Jordan points out, these elders left an enduring legacy for subsequent generations – from the preservation of an important part of their traditional knowledge to their belief in how plants and the rest of the natural world, a powerful and awesome force, should be approached, in the author’s words, “with thoughtful, even prayerful, respect.”

Plains Apache Ethnobotany is a well-written, easy-to-read and informative account about a different sort of relationship with the natural world. Interlaced with the personal stories, experiences and wisdom of Apache elders, it is a must-read for anyone with an interest in traditional ecological knowledge.

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Biodiversity Databases: Techniques, Politics and Applications

Edited by G. Curry and C. J. Humphries. 2008. The Systematics Association Special Volume Series 73. CRC Press, Taylor & B Francis Group, New York. 208 pages. 60.95 USD.

This book is meant to fill a gap in biodiversity, data and informatics. The subject is important for minimizing the digital divide and to make best available use of technology for reaching global sustainability,

environmental justice and increasing human and natural wealth. Not a small feat. As European expertise plays a significant role, the one-sided European view unfortunately carries throughout the book.

Regarding taxonomic and biodiversity data, the authors note that many data are not available as they are predominately published in hard copy, if at all.

The full size of the audience for such information can only be guessed, but making information freely available to China, India, Africa and Brazil would likely see impact factors explode

It's acknowledged that systematics is way behind other disciplines. But the two English editors present no real vision or underlying philosophy why we should move forward. Stopping the taxonomy discipline from crisis and decay with computers, and putting it onto the agenda appears to be a goal of this book and its 10 chapters.

This book is not well edited. The first chapter presents a great overview on the Global Biodiversity Information Facility. GBIF was basically developed through a Mega-Science Forum by the OECD, so GBIF and its data have a commercial agenda. Another chapter (5) deals with the fascinating automated insect and foraminifera identification, but it's a lengthy text. Use of OCR (Optical Character Recognition) is described. Automated tasks involving human expertise show identification reproducibilities as low as 30% or lower". This can put doubts in GBIF data, and some even claim that approximately 60% of all data on public webportals can be wrong!

Another chapter promotes the use of BioCASE (now an adopted GBIF protocol), where the data are globally linked and accessible but where the content remains with the provider. I like specifically the 24h Helpdesk for new BioCASE providers. BIOCISE and ENHSIN are also discussed (the SpeciesAnalyst or Digir platforms are virtually omitted, though). It is clear that the EU virtually has no high-quality, accepted Metadata standard. This is shocking and puts much doubt in the seriousness of the exercise and investment.

Further, the reader will not understand how the European Molecular Biology Laboratory (EMBL) connects with Genbank and with the DNA Database of Japan (DDBJ), and why the world needs different DNA databases to start out with? The Europe-based Expert Centre for Taxonomic Identification (ETI) is described in some detail, but not the global ITIS (Integrated Taxonomy Information System) database.

A key problem in the EU and its various biodiversity networks, projects and competing and fragmented funders is to share and re-use information without duplication (an identified GBIF goal). As GBIF is already located in Europe, one wonders what ENBI (European Network for Biodiversity Information) really does?

The reader interested in the front line of biodiversity will appreciate Chapter 8, which gives a nice overview of LIAS (Information and data storage system for lichenized and lichenicolous ascomycetes) and how it is used with a binary DELTA identification key.

Linking and merging biodiversity databases (Chapter 9) is an interesting and relevant topic, but this chapter lacks entirely the crucial statistical aspects.

This topic has plagued Biodiversity Database from the start and still requires resolution.

Other chapters deal with initial transition problems of the ERMS (European Register of Marine Species) database, with ILDIS (International Legume Database and Information Service), the ILDIS Legume Web, Fishbase and how it all links to SPECIES2000, and then to the infamous Catalogue of Life (linked with North America and cooperating with ITIS). The W3Tropicos database at Missouri Botanical Garden is also discussed, but not so much the Kew Garden one.

A nice point is made that internet use and performance for obtaining valid information can be described with metrics such as precision of information, rigorously correct information recall, time until information is retrieved, etc.

Chapter 10 (Priority Areas for Rattan Conservation on Borneo) makes for a key chapter for the application of online biodiversity databases (Borneo has approximately 8% of the natural vegetation remaining). An optimized area selection method called WORLDMAP gets applied to the data from the ASEAN Regional Centre for Biodiversity Conservation, and interesting data sets are presented for Borneo. It is worthwhile to note here that the EU, or countries like Germany basically, do not have such biodiversity layers for their own states! The book makes clear that relevant ecosystem data are not well represented in these online databases, and the authors kindly, but wrongly, excuse it because of "ecological complexities" (instead of political will). Unfortunately, this book also falls short in its conservation message: Tropical Forest Loss would just be excused as a "complex subject" (instead of being a simple one: just stop the promotion of economic growth and cutting trees), climate change and global warming are separate things, resources are managed by locals and carry no global rights, etc.

This book further shows how inefficient our institutionalized conservation and information management has become, and it's no wonder that our global biodiversity approach needs an entire overhaul. The Consortium of European Taxonomic Facilities (CETAF) is one of the biggest players, but it has a small role in North America. So, the global conservation responsibility of the EU is not well addressed in this book. The notion of world peace cannot be ignored in such discussions. SCAR Antarctic and International Polar Year programs make that clear (but unfortunately are not addressed in this book). What I am missing in this book is a policy and legal chapter (as one would expect from the title).

The georeferencing emphasis for the datasets is nice, but none of the standard tools recommended by GBIF are presented; nor is reference made to altitude information. The presented modeling methods are not based on standard techniques; e.g., ENFA and GARP (a global standard by now) and beyond WorldMap, no other

relevant optimization methods are explained). Instead, authors promote simple GRID arithmetic computations. Some of the presented statistical methods are modern but ignore better or similar relevant methods.

This book leaves us with a one-sided, European (mostly English and German) perspective. African, and even Chinese, Indian, Brazilian, Japanese, Russian, polar and ocean perspectives are widely left out. This book suffers from the missing North American and Australian expertise. This matters because the southern biodiversity community has not forgotten the role that the English Kew Gardens played in “biopirating” when Brazil’s rubber monopoly got lost to the Commonwealth.

Many of the URLs are very useful. And this is a strength of this book! Unfortunately, they are often promoting short-lived European initiatives, and are cited inconsistently in the chapters.

This book is not so strong on the technical and software concept. XML is mentioned well, but exact software and code details are not given, The PSE (Problem

Solving Environment) is mentioned, but work benches are hardly touched on. E-Science and GRID technology is mentioned but not how it links with GBIF and its data sources and formats. The Open Access code is not well promoted either. Another flaw is the virtual exclusion of Switzerland (being among the European leaders in biodiversity and habitat data).

It is not only that the book editors are from England, but that of the 24 contributors, virtually all are from the EU (mainly Germany, U.K. and Denmark). Such narrow perspectives are not in the best global, national, tax-payers and biodiversity interest. This book clearly shows what European national academies and scientists can produce; but it is almost a lost opportunity and we need to achieve much better if we care about our data heritage and the globe.

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Local Effects of Global Changes in the Himalayas: Manang Nepal

By R. Chaudhary, T. H. Aase, O. R. Vetaas, and B. P. Subedi. 2007. Tribhuvan University, Nepal and Uniforskning Bergen, Norway. 199 pages. 35 USD.

This book makes for a stimulating contribution to a popular global heritage site: Manang. It presents an overview of its highly dynamic mountain people, and their direct link with globalization, global climate change and the global community as a whole. The study area, located between 4000 – 7000 m altitude and presenting one of the highest agricultures in the world, covers the famous Annapurna Conservation Area.

Unfortunately, this informative book, published with strong Norwegian governmental help, goes along happily with the uncritical notion of economic growth (a scheme that by now has put most of the world in shambles). And so, the Norwegian authors state, wrongly: “There is an emerging consensus that globalization promotes economic growth and prosperity throughout the world”. Following the new style of NGO – and development aid-publications, it carries “cool concepts” and some “greenwash”, but it often lacks solid data and analysis to back it up.

The 19 contributors (12 Nepali, 6 Norwegians and 1 Canadian), describe a harsh region where contract labor is paid 1.4 US\$ per day. Because of a missing ocean nearby, the lack of selenium and iodine results in a high incidence of Kashin-Beck disease and cretinism. If agriculture declines in this part of the world, out-migration goes up, and so does tourism and the income from it.

A strength of this book is that the authors elaborate on the valuable medicinal plant harvest of Nepal and

other countries in the Hindu Kush-Himalayas (HKH) region. These studies, financially supported by the international corporation of the Volkswagen Foundation, report on over 60 different species of edible mushrooms (including *Morchella* species) for commercial export purposes. Other plant species used are, for instance, *Taxus baccata* and Kutki. “Because of the high global demand and lucrative profit – every age group – were found busy in collecting medical plants”. Such an effort cannot be sustainable. Overharvesting increases the price, and thus, the rarity of such plants, which results in a vicious cycle which can easily result in extinction (locally, and even globally).

The Himalayas have approximately 70 big glaciers, which makes for the third largest ice concentration outside of the poles. It supports rivers of global importance such as the Ganges, Brahmaputra and Indus, lifelines for millions of people. Due to man-made climate change; e.g., contamination of the atmosphere through fossil fuel, these glaciers retreat 50 m/year. The Braca glacier will likely disappear very soon (many informative photos are provided; the book overall shows 17 tables) leaving huge impacts. These facts are in direct disagreement with the opening statement of the book that “It would be more realistic to consider mountains as dynamic, certainly not fragile”.

A fascinating book topic deals with the fact that much of the traditional Nepali society is based on coexistence, rather than competition. For instance, Amchis (Tibetan healers) provide health care in villages, free of charge! Further, this book helps to expose “the tragedy of the commons” as a myth, because in many parts of the world, resources have been managed successfully for centuries by indigenous institutions!