



TERRALINGUA'S QUARTERLY NEWSLETTER

VOLUME II ISSUE#3, WINTER 2008-2009

# Langscape

*Unity in Biocultural Diversity*

**Biocultural  
Diversity in  
Education:  
Terralingua's Next  
Frontier**





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Langscape is Terralingua's quarterly newsletter

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To learn more about Terralingua please visit our website at: [www.terralingua.org](http://www.terralingua.org)

## Letter from the Director

Salt Spring Island, British Columbia, Canada, February 2009

Dear Members and Friends of Terralingua,

Happy New Year! This issue of Langscape is the first for 2009, so our warmest wishes to you for what lies ahead are in order—even more so that, as we all know, the new year ushered in more somber news about the state of the world. The global financial and economic “meltdown” is making daily headlines, and no less worrisome is the literal global meltdown being brought about by climate change, whose pace is becoming ever faster. No doubt, there’s nothing like a sense of immediate and present trouble for causing many—from academics to policy makers, to international agencies, NGOs, the media, and the general public—to narrow their focus onto the issues of the moment, as if all our social problems had to do with the economy, and all our environmental problems had to do with climate change. But alas, serious as these issues are, our troubles do not end there—and the biocultural diversity crisis is still here to remind us of just that.

Indeed, the “bad news of the day” should not obscure that the very bases of life on this planet are being threatened by a lot more than our present economic and climate woes. The ongoing loss of the world’s diversity in nature and culture is deeply undermining the structure, vital functions, and resilience—in one word, the health—of our eco-cultural systems. As many eco-cultural systems—the complex adaptive systems created by long-term interactions between people and environment—continue to falter and fail the world over, we should all be reminded that the challenges we face go well beyond “getting the economy going again” and “reducing our carbon footprint”. Our greatest challenges lie in countering the erosion of the diversity of life in all of its manifestations, and in restoring health to the planet’s eco-cultural systems. Until addressing these overarching challenges becomes the order of the day, we will be largely fighting piecemeal battles with limited chances for success.

Addressing these challenges is, of course, what Terralingua stands for. And that is why, from the start, we have been working on so many fronts. Our mission—to support the integrated protection, maintenance and restoration of the biocultural diversity of life through research, education, policy-relevant work, and on-the-ground action—may sound overly ambitious to some, but we don’t see any other way of going about it. You cannot address a problem unless you fully understand its nature, and that’s what you need research for. Through our research, we have developed some of the key theoretical foundations of the field of biocultural diversity, and some of the key tools—from biocultural diversity mappings to biocultural indicators to cross-cutting analyses of biocultural diversity conservation initiatives worldwide—that are helping flesh out the picture of what’s happening with global biocultural diversity, what threats it’s undergoing, and what can be and is being done to sustain it. And, putting knowledge to the service of on-the-ground action, we have also developed a project of our own in the Sierra Tarahumara of northern Mexico, where we work with the indigenous Rarámuri to support their efforts to restore vitality and resilience to their culture and landscape. In the previous newsletter, we gave you an overview of the projects we have been carrying out in these various domains—and more details will follow in upcoming issues.





Moving from knowledge to action also means engaging with the realm of policy, where key decisions are made that can move individual countries and the international community either closer to or farther away from attaining the goal of sustaining global biocultural diversity. Virtually from the beginning, Terralingua has been working with larger international organizations, such as the Worldwide Fund for Nature (WWF), UNESCO, the UN Environment Program, and the International Union for the Conservation of Nature (IUCN), to promote the cause of biocultural diversity and its adoption in the policies and programs of work of these organizations. In the last issue, we gave you a preview of some of the most recent activities in which we are involved in the realm of policy. We were getting ready to participate in the 4th World Conservation Congress (WCC) in Barcelona, Spain, and to make the case for biocultural diversity there—that is, in the world’s largest congregation of conservationists. Here, we’ll give you an update on what happened at the WCC, and about some of the follow-ups on the WCC outcomes, as concerns the further promotion of biocultural diversity within IUCN, the organization responsible for the WCC.

In the following pages, we’ll also update you on some of the new work we are undertaking in the other area included in our mission: education. Ultimately, we see education as a central tool for accomplishing our mission. Without widespread and in-depth understanding of the nature and value of biocultural diversity, it will not be possible to ensure that this diversity is cherished, protected, and sustained. Therefore, we have decided to engage in a broad-ranging outreach effort at many different levels, in order to make the concept of biocultural diversity well known to as wide and diverse an audience as possible. We will also begin to develop materials and tools for biocultural diversity education and capacity building, which in due time, we hope, will become widely used in many different contexts—from schools to community groups, to media rooms and more. Stay tuned for further information about these initiatives as they unfold over this year and beyond!

We have been glad to see new Terralingua members come into our family over the past year, and we want to extend a special greeting to all of them. We do hope to see many more come in this year, and also that members old and new will make more active use of the Members’ Discussion Forum on our website—it’s your special space to discuss and debate issues of biocultural diversity, and to let us know how we can better serve you and the goal of sustaining biocultural diversity! And for both members and friends, don’t forget the Roundtable Discussion Forum, which is open to everyone!

I couldn’t close this letter without an appeal to you, our key supporters, to help us achieve the goals we share. You can do that by contributing your ideas—and we can’t encourage you enough to do that!—but we also need you to do that by contributing

your donations. These are difficult times for all, needless to say; but small non-profits like Terralingua especially feel the pinch, as the main lines of philanthropic funding have shrunk significantly due to the financial crisis. This year the amount of new grant funds we expect to receive will be far more limited than it has been in the recent past. Your donations can make a huge difference if each of you contributes as generously you can. Last December, we sent you



an appeal, in which we indicated that our goal this year is to raise \$100,000. It may sound like a tall order, but it would only take 1,000 people donating \$100 each, or 200 people donating \$500 each! With your help, we can do it, and several of you have risen to the challenge already. We look forward to more of you joining the effort. Also notice that you can choose to either make an unrestricted donation, or to specifically earmark your donation for one of our projects. We thank you in advance for your generous support of the biocultural diversity cause!

With warmest regards,  
Luisa Maffi, Ph.D., Director

## SUPPORT TERRALINGUA!

As a non-profit organization, we rely on public support to operate and to carry out our projects.

Our funding comes from grants from foundations and other agencies, contracts for services to other organizations, and, most importantly, individual donors.

The contributions of individual donors like you are the solid foundation on which our operations rest. By sending us your donations, you show that you believe in Terralingua's mission to sustain biocultural diversity in this rapidly changing world, and want to support our work as much as possible.

To make a secure on-line donation,  
please visit [www.terralingua.org/html/support.html](http://www.terralingua.org/html/support.html)

Or send a check or money order, along with your contact information, to:

Terralingua  
217 Baker Road  
Salt Spring Island, BC. V8K 2N6  
Canada

Thank you for your generous support!

Terralingua is a registered charity in the USA. We will acknowledge all donations. USA donations are tax-deductible.

## Biocultural Diversity in Education: Terralingua's Next Frontier

When Terralingua got started twelve year ago, as a small organization with a big mission—promoting biocultural diversity worldwide—we had hardly any means beside our brainpower to do the job. For all the efforts we put into it, we still did not expect that the idea of biocultural diversity would move as quickly as it did from virtual obscurity to increasing visibility in academic and policy circles, as well as becoming a guiding concept for advocacy and a growing number of on-the-ground activities. But such has indeed been the case. Now several university and training courses on biocultural diversity can be found (see: The Global Diversity Foundation at [http://www.globaldiversity.org.uk/international\\_training/index.html](http://www.globaldiversity.org.uk/international_training/index.html)); policy processes are beginning to include a focus on biocultural diversity (see for instance the case of IUCN and the World Conservation Congress, described in our report below); on-the-ground projects aiming at biocultural diversity conservation are proliferating (witness the example of the projects we reviewed and analyzed in our soon-to-be-published Global Source Book on Biocultural Diversity; see [www.terralingua.org/GSB/GSB.html](http://www.terralingua.org/GSB/GSB.html)); and a small but growing number of stories focusing on biocultural diversity is making its way into print, audio, and web media (see for example a few recent ones listed on p. 12).



This is certainly remarkable, but just as certainly, the state of the world today leaves no doubt that there still is a long way to go toward promoting general understanding and appreciation of the nature and value of biocultural diversity, and toward making it a primary societal goal to sustain our life-essential and irreplaceable heritage in nature and culture. “Biocultural diversity” may have become an increasingly popular buzzword, but we need to go much deeper if we are to witness a global mind shift toward caring for and supporting biocultural diversity. Much more needs to be done, particularly in terms of biocultural diversity education, capacity building, and outreach. There still is a need for educational materials specifically geared toward teaching biocultural diversity to students and the general public. There still is a need for integrated training and capacity building on how to apply a biocultural perspective in practice. And there still is a need for raising awareness of biocultural diversity and its value through outreach at multiple levels. This requires a concerted effort to increase knowledge and understanding, and to bridge the gap between knowledge and action, between understanding and a concrete, genuine commitment to sustaining the diversity of life in all its forms, for the survival of all life on Earth.

Terralingua has been in the forefront of putting the biocultural diversity approach on the agenda of research, policy, and applied work. We now intend to become as instrumental in fostering global education, capacity building, and outreach in support of biocultural diversity. We plan to move in this direction by drawing in various ways from the work we have done so far, as well as by developing new tools and strategies, including increasing collaborations and partnerships with other organizations and initiatives that share similar goals. Among the new activities we will undertake this year are:

↓ Publication and dissemination of Terralingua's Global Source Book on Biocultural Diversity (GSB). The GSB's main goals have been to make available information about and lessons learned from a representative sample of on-the-ground biocultural diversity projects, and to promote a community of practice in biocultural diversity. The GSB manuscript is currently under review for paper publication, in partnership with a major international organization. In order to further expand the reach of the GSB, we intend to create an interactive and expandable web-based "gallery" of the projects, hosted on Terralingua's website. This gallery will include the project descriptions along with summaries of the book's main points in various languages. The gallery will allow for GSB contributors and interested others to communicate with one another about the projects. It will also include a module for electronic submission of new projects, according to the GSB criteria for inclusion. Projects that fit these criteria will be added, progressively expanding the gallery and its information and networking capabilities.

↓ Launch of a discussion forum on biocultural diversity conservation in practice, in collaboration with other organizations with shared interests. This should provide an opportunity to more broadly foster a community of practice in biocultural diversity conservation, by making the forum known to and used by a much larger public, vastly enhancing our ability to stimulate a broad-ranging discussion and engage in mutual learning.

↓ Collaboration with a well established broadcasting and educasting media project, which has recently begun engaging in programs related to biocultural diversity. Preliminary discussions with this media project suggest the potential for inclusion of Terralingua-produced materials on biocultural diversity in some of the radio programs planned for 2009-2010, which will be widely broadcast in North America and internationally, and in the post-broadcast extension of the radio programs' life through web-based educasting.

↓ Planning and initial preparation of educational materials on biocultural diversity for students and the general public. Building on the past success of the educational booklet "Sharing a World of Difference: The World's Linguistic, Cultural, and Biological Diversity" that we produced for UNESCO (available in electronic form on our website at [www.terralingua.org/publications/intro.html](http://www.terralingua.org/publications/intro.html)), we will outline and begin to develop materials for young adult and adult education, drawing from our conceptual writings and other relevant literature, as well as from our global projects (mapping, indicators, GSB) and case studies. These materials will form the basis for the later production of educational modules under the Terralingua label. We also intend to begin exploring ways of introducing biocultural diversity to young children, through collaboration with alternative schools and programs.

↓ Planning and initial development of outlines and materials for a training program on biocultural diversity and eco-cultural health. These activities will dovetail both with the educational work described above and with our work with the Rarámuri people in the Sierra Tarahumara. These initial activities should lay the foundations for a later concerted effort to develop Terralingua's biocultural diversity training capability. In this process, we will also explore complementarities and synergies with germane organizations involved in biocultural education and training.

↓ Elaboration of a systematic communications and media strategy. Both drawing from and contributing to the activities outlined above, we will seek to formulate the initial steps of a systematic communications and media strategy for Terralingua, to increase the public exposure and reach of our work and of the biocultural perspective in general. Improving our outreach capability will also benefit our ability to influence various constituencies, from decision makers to funders to the general public, and help bring in greater support for Terralingua's work and for the cause of biocultural diversity.

Our goal with these activities is to increase our capability to educate and influence an ever broader constituency concerning the importance of biocultural diversity and the need to sustain it for generations to come. Through this set of activities, we expect to gain a more lasting impact at the global level, among academics, professionals, policy makers, media, and the general public. We also hope that these activities will contribute to opening up greater opportunities for funding for biocultural diversity from a larger roster of foundations and agencies.

As we embark in this ambitious and multifaceted new venture, we realize full well that we need to draw ideas and expertise not only in-house, but also from many other sources. And one of the key sources is our membership—you who are reading this! You, our membership, are a very diverse lot geographically, ethnically, and in terms of your backgrounds and skills. We can only expect that your input and suggestions on how best to develop an education and outreach program on biocultural diversity would be as diverse—and very informative! For this purpose, we are establishing a dedicated thread in the Members' Discussion Forum—taking off from the fascinating posting contributed by Ernest Muhly (which we reproduce here on p. 16). Please visit the forum and write to us! We very much look forward to hearing from you and to working with you to increase awareness and appreciation of biocultural diversity.



*Editor's Note: UNESCO recommends the following educational resource, "Sharing a World of Difference: the Earth's Linguistic, Cultural, and Biological Diversity". This publication can be downloaded in .pdf format from our website: <http://www.terralingua.org/publications/intro.html>.*

Like the house of the Tarahumara, that's what the Tarahumara language is like.  
 Like the the very clothes of the people, that's what the Tarahumara language is like.  
 But once we lose our language we will be nothing, and we don't want that to happen!

— Ro'lolisi Batista, a woman teacher from Ojachichi in the Sierra Tarahumara, Mexico

## Policy for Biocultural Diversity: Terralingua at the 4th World Conservation Congress



With about 8000 participants from governments, international agencies, NGOs, Indigenous Peoples' organizations, business, and academia, the 4th World Conservation Congress, held in Barcelona, Spain on 5-14 October 2008, was—according to its organizer, the International Union for the Conservation of Nature (IUCN)—the largest ever meeting of people concerned with environmental conservation and sustainability. In such a context, and with hundreds of events taking place at the WCC Forum during the first week of the congress, it was all the more remarkable that over 60 biocultural-diversity-related events were prominently featured in a “Bio-cultural Diversity and Indigenous Peoples Journey”—one of only

a dozen thematic groupings that were created to help participants meaningfully navigate the maze of Forum events ([www.iucn.org/congress\\_08/forum/journeys/biocultural](http://www.iucn.org/congress_08/forum/journeys/biocultural)).

That in and of itself is a clear indication of how far we have come since the idea of an “inextricable link” between cultural and biological diversity was first affirmed in the International Society of Ethnobiology's Declaration of Belém (1988), and since Terralingua began to promote the concept of “biocultural diversity” as the interlinked and interdependent diversity of life in nature, culture, and language (1996). What was once a relatively obscure notion tossed around by a few academics and activists convinced that the historic relationship between people and the environment has been, and should be seen as, one of co-adaptation and co-evolution, is now one with increasingly widespread currency in research, practice and policy. The 4th WCC was a major opportunity for pushing the biocultural agenda forward at the international level, and for that reason Terralingua had a significant presence there. We organized or co-organized several events at the Forum, and we co-sponsored three biocultural-diversity-related resolutions that came up for adoption by the IUCN membership during the Members' Assembly the second week of the WCC. We were quite pleased with the results of our efforts, along with those of the many other colleagues and sister organizations that took part in the Bio-cultural Diversity and Indigenous Peoples Journey.

1. Indigenous peoples have the right to establish and control their educational systems and institutions providing education in their own languages, in a manner appropriate to their cultural methods of teaching and learning.
2. Indigenous individuals, particularly children, have the right to all levels and forms of education of the State without discrimination.
3. States shall, in conjunction with indigenous peoples, take effective measures, in order for indigenous individuals, particularly children, including those living outside their communities, to have access, when possible, to an education in their own culture and provided in their own language.

Excerpt from the United Nations Declaration on the Rights of Indigenous Peoples, Article 14, adopted by the UN General Assembly in 2007.



Our main events were:



Dr. Margaret Florey and Jonathan Loh taking questions after Terralingua's session 'The World's Cultural Diversity: New Measurements Show What's Happening and Why It's Important to Conservationists'. Credit Terraviva, October 2008.

✎ The workshop “The World’s Cultural Diversity: New Measurements Show What’s Happening and Why It’s Important to Conservationists”. David Harmon and Jonathan Loh presented the initial results of Terralingua’s Index of Linguistic Diversity, Stanford Zent introduced Terralingua’s Vitality Index of Traditional Environmental Knowledge, and Margaret Florey discussed her work on the Linguistic Vitality Index. This event was well attended and attracted the attention of the WCC press. A report on this session appeared in an article titled “Globalisation is killing languages” in the congress bulletin *Terraviva*. You can find the abstract, official report on this session and the *Terraviva* article on our website at [www.terralingua.org/activities/intro.html](http://www.terralingua.org/activities/intro.html), under the October 2008 news archive.

✎ The knowledge café “Diverse Planet, Healthy Planet: Biological and Cultural Diversity as Cornerstones of Eco-cultural Health—Implications for Assessment, Policy, and Implementation”. David Rapport led a very lively round-table discussion with interested participants about the link between biocultural diversity and the eco-cultural health of our planet—which is the basic link underlying our work with the Rarámuri people in the Sierra Tarahumara. Abstract and official report are found at the same link as above.



Dr. David Rapport engaging participants in Terralingua’s knowledge café ‘Diverse Planet, Healthy Planet: Biological and Cultural Diversity as Cornerstones of Eco-cultural Health-Implications for Assessment, Policy, and Implementation’. Credit: Chantal Rapport, 2008.

“More than half of the world’s known languages are spoken by less than 10,000 people, and 85 per cent of the world languages are indigenous ones – the most vulnerable.” From article “Globalisation is killing languages” published in the congress bulletin *Terraviva*.



✎ The launch of the pre-publication version of Terralingua's *Global Source Book on Biocultural Diversity*, authored by Luisa Maffi and Ellen Woodley. Maffi and Woodley illustrated the central idea for the Source Book—that of reviewing and analyzing a significant sample of biocultural diversity conservation projects from all over the world, to draw lessons about successes and obstacles and offer recommendations for future work—and gave examples of the projects included in the volume, which is now under review for publication.

✎ The Terralingua exhibit at the Biocultural Diversity booth that had been set up (under the coordination of the Global Diversity Foundation) in the WCC exhibit space. Here we had an opportunity to display information about our projects and copies of our publications, and to interact with exhibit visitors. Our former Board member Rick Stepp, with whom we have been collaborating since 2003 on biocultural diversity mapping, exhibited his outstanding maps of global and regional biocultural diversity, which had been “premiered” at the New York symposium “Sustaining Cultural and Biological Diversity in a Rapidly Changing World”, co-organized by the American Museum of Natural History (AMNH), Terralingua, and IUCN in April 2008.



Dr. Luisa Maffi and Dr. Ellen Woodley greeting visitors to Terralingua's exhibit at the Biocultural Diversity Booth. Credit: David Rapport, 2008.

✎ In addition, we co-organized the workshop “Integrating and Sustaining Cultural and Biological Diversity: The Difficult Questions”, also with AMNH and IUCN, which was a follow-up to the April 2008 symposium (see abstract at [www.terralingua.org/activities/intro.html](http://www.terralingua.org/activities/intro.html)). A group of thought-provoking speakers addressed some “difficult questions” related to obstacles to mainstreaming issues of culture and cultural diversity in relation to the conservation of biodiversity, and to how to avoid threatening the links between biological and cultural diversity in the practice of conservation.

While holding these Forum events and participating in several others, we were also actively working to promote the resolutions that we were co-sponsoring at the Members' Assembly (text of these resolutions found at [www.terralingua.org/activities/intro.html](http://www.terralingua.org/activities/intro.html)):

- ✎ Integrating Culture and Cultural Diversity into IUCN's Policy and Programme
- ✎ Implementing the United Nations Declaration on the Rights of Indigenous People
- ✎ Recognition and Conservation of Sacred Natural Sites in Protected Areas

The affirmative vote of a majority of members was needed for adoption of resolutions, so it was necessary to ensure that the importance of these particular resolutions would be understood and appreciated by members. So it is quite significant that, when they came up for a vote, all three resolutions were passed! The next step now is of course implementation, and as key proponents of the “Integrating Culture and Cultural Diversity into IUCN's Policy and Programme” resolution we have chosen to focus on this one for follow-up within IUCN. We have initiated contact with IUCN to promote the implementation of this resolution, and we'll keep you posted on developments on this front!

# Terralingua News and Activities

## WCC Related Articles and Publications:

~Luisa Maffi's article *Talking Diversity*, IUCN magazine World Conservation, January 2008 ([www.terralingua.org/publications/Maffi/Talking Diversity.pdf](http://www.terralingua.org/publications/Maffi/Talking%20Diversity.pdf))

~Luisa Maffi's article *Cultural Vitality*, Resurgence Magazine, October 2008, launched at the WCC (<http://www.resurgence.org/magazine/article2590-Cultural-Vitality.html>)

~Article *Globalization is Killing Languages: WCC news bulletin Terraviva*, October 2008, featuring Terralingua Indicators workshop at WCC ([www.terralingua.org/activities/IUCN/Terraviva BARCELONA08oct.pdf](http://www.terralingua.org/activities/IUCN/Terraviva%20BARCELONA08oct.pdf))

~Interview with Luisa Maffi in Terry Glavin's Article *In Defence of Difference*, Seed Magazine ([http://www.seedmagazine.com/news/2008/10/in\\_defense\\_of\\_difference\\_1.php](http://www.seedmagazine.com/news/2008/10/in_defense_of_difference_1.php))

## Other Publications:

~Terralingua Board member, Eugene Hunn, has won first prize in the anthropology/archaeology division of the 2008 PROSE awards for his new book with Arizona University Press: *A Zapotec Natural History: Trees, Herbs, and Flowers, Birds, Beasts and Bugs in the Life of San Juan Gbëë*. The book is accompanied by a CD-ROM.

~Terralingua Advisory Panel member, Professor Anvita Abbi, has finally completed her Trilingual Dictionary of Great Andamanese. "That was my tribute to the community, especially the children. I did it out of love for them."

~Terralingua Board member Susan Fassberg has developed a line of greeting cards to highlight the importance of language revitalization. "In a Word" celebrates unique words from around the world that express universal values and experiences difficult to articulate in English. These embossed cards are lovely,

and a portion of proceeds from card sales benefits non-profits. Terralingua has been chosen as the first recipient of funds, so we hope this new line will be very successful!

Take a look at <http://www.connectingdotz.com>



*"All these seemingly disconnected events are the symptoms, you could say, of a global epidemic of sameness. It has no precise parameters, but wherever its shadow falls, it leaves the landscape monochromatic, monocultural, and homogeneous. Even before we've been able to take stock of the enormous diversity that today exists—from undescribed microbes to undocumented tongues—this epidemic carries away an entire human language every two weeks, destroys a domesticated food-crop variety every six hours, and kills off an entire species every few minutes. The fallout isn't merely an assault to our aesthetic or even ethical values: As cultures and languages vanish, along with them go vast and ancient storehouses of accumulated knowledge. And as species disappear, along with them go not just valuable genetic resources, but critical links in complex ecological webs."*

Terry Glavin, Seed Magazine, October 2008

## GLOBAL SOURCE BOOK ON BIOCULTURAL DIVERSITY

### Project Profile: Cibecue Community School, Arizona



Students identifying plants at Goshtlish Tú Bil Sik<sup>1</sup>né in 2007 photo by Jonathan Long.

In 2005, students at the Cibecue Community School initiated a project with several objectives: first, the project was to teach the youth in the community about traditional Apache values for the land. This was done by identifying the Apache names of places and finding the stories that go along with them

that tell the students the historical, social and moral interpretations their ancestors had of these places. Second, the aim was to combine traditional ecological knowledge with the scientific method to explain the changes in the land. Third, the students had to analyze the changes in the environment from a personal and social perspective. Finally, the aim was to instill in the youth a commitment to restoration of their land and waters.

White Mountain Apache culture emphasizes the infusion of the physical world with mental and spiritual dimensions. The Apache language illustrates the inseparability of the two: for example, the root word *ni'* can either refer to the "mind" or to "land". Places within the landscape remind people how to live right, and people's behaviors affect the conditions of the landscape. Water bodies hold exceptional significance, as nearly half of the place names in many regions of aboriginal Apache lands are associated with water bodies or wetland species.

The largest fire in the history of the Southwest, the Rodeo-Chediski wildfire, struck Cibecue which had a tremendous impact. The wildfire provided the impetus for the project to restore the springs and wetlands that were damaged. At the same time, there was a need to better engage the divided community of Cibecue in restoration research and planning. The students visited 16 of the original sites that Basso had been to, took photographs, and conducted an inventory of the plants, rocks, soils, and water. They also conducted interviews with their elders to better understand how the land has changed over this time period. They compiled their findings in a computer database, including the Apache names for plants, places, and other ecological features, and prepared a poster, slideshow, and video to share their findings with community members. As the project is ongoing, the students will also prepare an exhibit for the tribal museum based on these findings. The students have worked on two ecological restoration projects, and future plans

include working with community members to plan more restoration projects for additional sites that they have studied. Extensions of the project may include recording information needed to safeguard springs and aquifers from drawdown by groundwater pumping, and to guide protection and restoration of areas damaged by wildfires. An important part of the work is reviving pride and identity among the youth of Cibecue. In the process of gathering data (soil, plants, water, geology, GPS etc.), the students learn why their ancestors held such respect for water and reverence for these sacred places. This learning is especially important now when young people are losing their language and identity and assimilation is taking place because of modern day technology and lifestyle. By learning the Apache names for features of the land in their own backyard, they understand that place names speak to the land and its attributes, as well as the condition of the land and the traditional values of their people. There is immeasurable pride that comes with true understanding of ones' culture, the feeling of reverence, and the understanding of why the land and water is sacred and the understanding that the land still speaks to the morals and values of the Apache people - it is what the project leaders feel is "*what makes our project unique*".

So far, the students are learning from the land - as they listen, observe and study, they hear the springs speak to them and they understand that the water is sacred. They also understand the land from a scientific perspective. The community is also beginning to understand what the project is about, and they are starting to provide input by giving additional information on what they know of the changes that have taken place in their life time and making recommendations as to what they think is important for the youth of the community to study. For example, they want the students to learn about the medicinal plants. One elder said she is willing to teach someone how to boil medicine for healing. Another elder said he knows of where there is a hot spring and he would be willing to show the students, and yet another elder gave a story of a lake and a spring between Grasshopper and Salt Creek, which she said it is located on an old trail that was used by the old ones. The students have demonstrated deeper cultural knowledge and a greater willingness to speak in Apache and develop a proficiency in the language. "*The names of all these places are good. They make you remember how to live right, so you want to replace yourself again*" (Nick Thompson quoted in Basso 1996: 59). The project has lead to significant investments in post-wildfire monitoring of springs and several rehabilitation/stabilization projects. These projects are an important step forward in expanding the scope of the federal post-wildfire response effort to better address impacts to eco-cultural resources. The program has also been talked about as a possible model for other communities on the Reservation.

## Biocultural Diversity Primer



*Editor's Note:* Last October, Terralingua Board member Sooz Fassberg inspired me with her comment, *maybe I could add some truly layman's questions to your FAQ list.* So I created a section on biocultural diversity basics for those of you who are new to Terralingua and the field of biocultural diversity. Please feel free to send in your questions and/or comments for subsequent issues. ([ortixia@terralingua.org](mailto:ortixia@terralingua.org)).

**Biocultural diversity** comprises the diversity of life in all of its manifestations: biological, cultural, and linguistic, which are interrelated (and likely coevolved) within a complex socio-ecological adaptive system. This definition comprises the following key elements:

- The diversity of life is made up not only of the diversity of plants and animal species, habitats, and ecosystems found on the planet, but also of the diversity of human cultures and languages.
- These diversities do not exist in separate and parallel realms, but rather are different manifestations of a single, complex whole.
- The links among these diversities have developed over time through the cumulative global effects of mutual adaptations, likely of a co-evolutionary nature, between humans and the environment at the local level. (LM)

**TEK** is a “cumulative body of knowledge, practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationships of living beings (including humans) with one another and with their environment” (Berkes 1999:8).

The term “traditional”, as used in this context, should not be taken to refer to something static and homogeneous. Rather, “tradition” should be understood as “a filter through which innovation occurs” (Posey in press), a “tradition of invention and innovation” (Pereira and Gupta 1993). In a report to the CBD Secretariat, the Four Directions Council of Canada explains: “What is ‘traditional’ about traditional knowledge is not its antiquity, but the way it is acquired and used. In other words, the social process of learning and sharing knowledge, which is unique to each Indigenous culture, lies at the very heart of its ‘traditionality’.” Much of this knowledge is actually quite new, but it has a social meaning, and legal character, entirely unlike the knowledge indigenous people acquire from settlers and industrialised societies” (Four Directions Council, 1996). Traditional knowledge also varies according to age, gender, and a host of other variables. (LM)

**Eco-Cultural Health** is the well-functioning (sustainability) of the human/environment system.

The field of research concerned with eco-cultural health merges two holistic concepts: that of ecosystem health and that of biocultural diversity.

Looking at ecosystems from a ‘humans-in-environment’ perspective, eco-cultural health brings together the biophysical aspects (soil, air, water, biota), economic

aspects (human activities and their sustainability), social and cultural aspects (values, practices) and human and animal health. The health of eco-cultural systems can be measured in terms of resilience, vitality, and organization. Today, we are experiencing the loss of health of both ecosystems and the world's cultures – placing the fate of the earth in considerable peril. Bringing to the fore a more integrative concept of nature and culture, and devising clear measures of conditions and trends in eco-cultural health at global and sub-global levels, should enable a reformulation of public policy on the environment to enhance the sustainability of life on our planet. (LM, DR)

### How many languages are there?

Linguists estimate that there are anywhere from 4,000 to more than 10,000 distinct languages still spoken. Many linguists give a figure of 6,000-7,000, more or less following the lead of the reference work *Ethnologue: languages of the world* ([www.sil.org/ethnologue/](http://www.sil.org/ethnologue/)). (TSK)

### How many speakers do various languages have?

The median number of speakers of a language is probably around 5-6,000. More than 95% of the world's spoken languages have fewer than 1 million native speakers. Half of all the languages have fewer than 10,000 speakers. A quarter of the world's spoken languages and most of the Sign languages have fewer than 1,000 users. (TSK)

### Linguistic human rights in education:

Indigenous peoples represent around 4 per cent of the world's population, but control or manage almost 20 per cent of the surface of the earth and speak at least 60 per cent of the world's languages. The fate of the lands, languages and cultures of indigenous peoples is decisive for the maintenance of biodiversity and linguistic and cultural diversity. All three are correlated, maybe also causally connected through coevolution, and all three are seriously threatened.

Linguistic and cultural diversity may be eroding even more rapidly than biological diversity. Languages, the carriers of culture, are today disappearing at a much faster pace than ever before. Therefore, linguistic and cultural

human rights in education for indigenous peoples are crucial for the survival of indigenous languages and cultures and for the future of the planet. (TSK, LM)

### Why should literacy be taught in indigenous languages?

It is now well established that early learning normally takes place through the medium of the mother tongue up to the operational stage, and one of the reasons why today's students have been falling behind or failing in many education systems is that this fact has been disregarded. The mother tongue is what enables children to "take off" intellectually once they start school. It provides a basic stability, without which children fail to develop, and it enables children to put their thoughts into words and to integrate harmoniously with the world around them. Children feel comfortable in their mother tongue, as they do in their parents' arms, and by denying them the opportunity to use this familiar linguistic support, so appropriate to their basic needs of self-expression and creativity, the school at once begins to hold them back. (UNESCO)

Firstly, indigenous education reflects and maintains the cultures, values and knowledge of our peoples who have a history going back at least 50,000 years, peoples who have survived a genocide invasion of our lands. Our knowledge, our cultures and our languages belong to us, they are what makes us who we are. Indigenous education is part of passing this knowledge on to future generations. Of course we also need to learn about the dominant nonindigenous cultures, but we assert our right to learn in our own ways, at our own pace, in institutions that we own and control. (Jack Beetsen, President, Federation of Independent Aboriginal Education Providers Ltd., Australia)

#### Credit Notes:

LM = Luisa Maffi

DR = David Rapport

TSK = Tove Skutnabb-Kangas

Berkes, F. 1999. *Sacred Ecology. Traditional Ecological Knowledge and Resource Management*. Taylor & Francis, Philadelphia and London

Posey, D.A. 2001. *Biological and Cultural Diversity: The Inextricable, Linked by Language and Politics*. In *On Biocultural Diversity: Linking Language, Knowledge, and the Environment*, ed. by L. Maffi. Washington, D.C.: Smithsonian Institution Press.

Pereira, W. and A.K. Gupta 1993. *A Dialogue on Indigenous Knowledge*. *Honey Bee* 4(4): 6-10.

## Terralingua Members' Forum

Here is a recent forum entry from one of our members that complements our theme of Education in Biocultural Diversity. Join the discussion at [www.terralingua.org/tldyn/index.php](http://www.terralingua.org/tldyn/index.php)

Greetings All,

One of the real tragedies concerned with the loss of biocultural diversity is that we have little knowledge about what we've lost until it is gone and slowly, or even suddenly, natural systems that worked quite well, or even reasonably well, don't seem to do so anymore. And creating new systems or restoring old ones are tenuous at best. In whose image or based on what understandings and wisdom do we create or restore systems?

I am not a linguist, but a beekeeper, heirloom organic gardener and ecologist. The bees have been, and will always be a mystery to me and I came to realize early on in our shared adventure that while I could enhance their longevity and pleasures by planting annuals, perennials, shrubs and trees they enjoyed and found useful, in large part their survival hinged on respecting that in over a hundred-million years of coevolution with the angiosperms, they knew better than I how to survive.

It seems to me that the disruption and loss of biocultural diversity and languages which are the gateways to understanding the wisdom inherent in the coevolution of the animal and plant realms is both a multi-reality phenomena, as-well-as something that has been going on as long as animals and plants have interacted. The only differences with human interactions being that we have the potential to understand what is happening and perhaps if we choose to do so, focus more on changes that are beneficial than detrimental to the sustainability of all

those concerned.

While documenting what exists, and where possible what has been lost is a necessary process, I feel that overcoming over two-thousand years of illusionary thinking that somehow mankind's salvation depends on a entity that is not, as Eliade once said "...manifested ...in the very structure of the world and of cosmic phenomena." can only really be accomplished by providing opportunities for the children growing up today to learn about what Aboriginal, Indigenous and Native Peoples' cultures have appreciated all along.

Curiosity and magic seem to be things that are driven out of people by cultures and societies and their corporate, political and theological minions whose self-interest is held in highest esteem. Attempting to change the attitudes of people who have bought-into the illusions of domination and their rights at the exclusion of the rights of others including the natural world, are not easy things to do. But helping children to grown into a biocultural respectful and participatory frame of mind is not only a worthwhile endeavor, it might be the essential path to insuring biocultural sustainability.

Finding way to do this is something I would enjoy collaborating and cooperating on with like minded people.

JP

Ernest J.P. Muhly





## Become a Terralingua Member!

Our Membership campaign continues, and we are very enthusiastic about the ongoing communication with this great network.

If you would like to become a member of Terralingua, please complete the membership form on our website  
<http://www.terralingua.org/tldyn/index.php/member/register/>

Terralingua members receive our quarterly newsletter Langscape, are entitled to discounts on our publications and other special offers, and get occasional updates on “hot off the press” news.

Members have exclusive access to the Members' Discussion Forum, which is devoted to how Terralingua and its members can work together to achieve our shared goals.

If you want to know more about how to become a member, send an email to: [membership@terralingua.org](mailto:membership@terralingua.org).

For information about Terralingua's work, please send an email to [info@terralingua.org](mailto:info@terralingua.org).

Next Issue of Langscape:

Networking  
for  
Biocultural  
Diversity

If you would like to submit  
an article for this issue,  
please email your request  
to:  
[ortixia@terralingua.org](mailto:ortixia@terralingua.org)