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A Personal Assessment of the SERI Conference in Perth and What It Reveals about the Society

Paddy Woodworth

The Society for Ecological Restoration International conference in Perth, Western Australia, last August offered a number of perspectives on how the society is positioning itself to engage with the massive global challenges currently faced by restoration ecologists and ecological restorationists. The location of the conference was evidence of the society's ongoing but still uneven efforts to expand its horizons; a healthy development already flagged by the Zaragoza, Spain, conference in 2005. The news that the next conference will be in Mexico in 2011 confirms this trend.

The awareness of interconnectivity that lies at the heart of ecology tells us that, in the last analysis, we cannot restore ecosystems anywhere if we do not restore them everywhere. Yet we are also culturally and geographically rooted as human beings; it is natural that the SERI tree has for most of its short history been shaped by the American soil from which it has grown. Inspiring and instructive as many of the American restoration stories are, however, they are limited to particular landscapes and histories. To justify the "I" after the "SER," the society must not only embrace but be informed by other ecological and cultural experiences. The journey to Mexico should represent a further shift, bringing the society into a closer relationship with the developing world.

The Perth conference also marked another geographical and cultural shift with the appointment of Jim Harris, the tireless and ebullient soil ecologist from Cranfield University in England, as the first non-American chair. The Colombian background of the Society's new Executive Director, Amanda Jorgenson, also augurs well for a more genuinely international SERI in the future.

Before Perth, we northern restorationists might have been forgiven for thinking that Australian approaches to restoration would be similar to those in the United States. After all, the continent has a broadly similar history of European settler occupation, the savage dispossession and near-extirpation of indigenous peoples, and ever-intensifying agricultural and industrial development. In Perth,

however, we learned that Australian ecological history is so different from America's that restoration there follows a very distinct trajectory.

The entertaining and educational preconference field trip led by the conference director, Kingsley Dixon, showed some of these contrasts in dramatic close-ups. We tiptoed through bush whose striking biodiversity per square meter, and astounding levels of endemism, richly deserved Dixon's sobriquet of "knee-high rainforests." Seed dispersal, for example, can never be taken for granted in this landscape. Many plants, as he put it, "like to live where mother lives." The implications for restoration science and practice in southwestern Australia, the continent's only biodiversity hotspot, are radical.

These implications were spelled out at the conference by Stephen Hopper, formerly director of Perth's Kings Park and Botanic Gardens, and now, in another fertile shuffle of the global ecological cards, director at the historic Kew Gardens in London. In his plenary address, he described a new paradigm for what he calls OCBILs—not a newly discovered Australian marsupial, but an acronym for Old, Climatically Buffered Infertile Landscapes (Hopper 2009). Ancient landscapes like the southwest Australian floristic region, South Africa's greater cape region, and Venezuela's Pantepui highlands have, he argued, "special biological traits combined with unparalleled species richness and a lottery-style recruitment and community assembly [which] render restoration efforts complex, slow, uncertain, costly or impossible."

Those of us from the northern hemisphere (and from much of the South too) learned from Hopper that we live in YODFELs—Young, Often-Disturbed Fertile Landscapes. We never thought restoration was easy in any context, but it is certainly more straightforward where you can rely on seed dispersal and natural succession to do a lot of the heavy lifting once abiotic structural restoration and selective planting have kick-started the process.

The conference offered a series of presentations on two very significant local restorations—that of the jarrah forest after mining by Alcoa, and the equally ambitious Gondwana Link. Though they are very different in their scale and intent, both projects illustrate aspects of the challenge of

working in OCBILs. The biodiverse Darling Range jarrah (*Eucalyptus marginata*) forest sits on top of Perth's main watershed—and on some of the world's most aluminium-rich deposits of bauxite. When Alcoa began mining in the 1950s, their efforts at “rehabilitation” epitomized what every restorationist dreads—monocultural plantations of alien pines and eastern Australian eucalypts. A combination of citizen protests and a remarkably enlightened local company management produced a paradigm shift, and today the mining restoration is state-of-the-art. Topsoil and substrate are “double-stripped” before the bauxite layer below is extracted. Critically, mining is rotated so that topsoil removed from one zone is placed on another zone due for restoration *within days*, with its microbial life still virtually intact (Hobbs 2007, Woodworth 2009b).

The plant species identified in premining surveys are meticulously replanted, since dispersal and natural succession cannot be relied upon here. Sedges and other plants with recalcitrant germination are specially cultivated in laboratory conditions, at considerable cost. The recovery rate for plant species richness (though not abundance) is close to 100 percent in many instances. Animal return is also very impressive. If all industries restored at this level—and indeed if Alcoa did so at all its sites in other countries—we would be living in a much healthier world.

The Gondwana Link (GL) is more a vision than an organization, presented to us in a most engaging and wide-ranging plenary presentation by its charismatic coordinator Keith Brady. The plan is to restore and reconnect a remarkable range of ecosystems, from the wet karri (*Eucalyptus diversicolor*) forests of the extreme southwest of the continent to the semiarid Great Western Woodlands, 1,000 km into the interior. Some of these systems are still remarkably intact. Others, especially the bush between the Sterling mountain range and the Fitzgerald River catchment, have been massively degraded by intensive and inappropriate farming methods, resulting in native biodiversity collapse and chronic soil salinity.

Brady emphasized the importance of working with local people—white and aboriginal—rather than against them or without their knowledge. Some local farmers are participating, restoring native vegetation on their own land, while other farms have been purchased and very extensively restored by GL. Substantial funding support has come from U.S. foundations like the Nature Conservancy and Pew, while GL's aims are implemented directly by national NGOs like Bush Heritage, Greening Australia, and the Wilderness Society. Meanwhile, indigenous Noongar people are revisiting and recovering the ancient dreamtime trails and sacred sites from which they have been so recently and brutally evicted (Woodworth 2009a).

The Link provides an interesting focus for debate on OCBIL issues. Is it wise to build corridors where dispersal and succession of native plants will be excruciatingly slow or nonexistent, but which may provide vectors for

non-native invasive plants and mammalian predators? Should it not be a priority to preserve remnants of native bush that may be very small indeed but that are both remarkably resistant to non-natives (as long as the soil is undisturbed) and fantastically rich in endemism? The jury is still out, but the project is a truly inspiring one for the prospect of multiple-landscape restoration.

Hopper's plenary lecture and a conference workshop led by Kew's recently appointed restoration ecology coordinator, Kate Hardwick, highlighted the very promising potential of botanical gardens to operate as international hubs for restoration (Hardwick et al. 2009). There were many other diverse strands to the conference, and because of the profusion of parallel sessions there were many highlights that I have not noted here.

But perhaps the time has now come for SERI to consider whether the multiplicity of its conference sessions is becoming counterproductive. Despite the impressive and good-humored organization, even the highest-profile symposia and workshops suffered from a sense of rush and clutter, a frustrating feeling that many bases were being touched, but few of them were being explored in depth.

Many good conferences suffer from this defect, but that does not make it any less important to draw attention to the problem. On a purely personal and anecdotal level, I was surprised by the number of attendees—especially from Australia—who expressed to me some disappointment or feeling that they had learned very little new at the conference. It is certainly always exciting to be made aware of the rapidly increasing number of restoration projects taking place around the world, and SERI's cohabitation of restoration ecologists and restoration practitioners inevitably makes for exceptionally—and richly—varied demands on conference organizers. Nonetheless, a tighter sieving of topics next time would give greater opportunity for the significant raw material that was visible in many of the Perth sessions to be forged into lasting and action-oriented proposals.

The high profile of Australian aboriginals at the conference provided passionate and poignant witness that indigenous peoples are often front-line victims of environmental degradation. But the conference maintained a widespread failure to subject traditional ecological knowledge (TEK) to the same rigorous examination to which we rightly subject science-based knowledge. From the TEK sessions I attended, much of what is being discussed is the envelope of indigenous culture within which conventional science-based restoration sometimes takes place. This is important and useful. Restoration projects that do not respect local traditions and engage democratically with the wishes (often diverse and contradictory) of local people are doomed to failure. But this respect and engagement should not be confused with the equally important task of identifying and analyzing, rigorously, the restoration techniques specifically developed by some—but by no means all—indigenous peoples.

Aareka Hopkins spoke on some excellent—but entirely science-based—restoration projects in the context of Maori traditions in New Zealand. Where in his restoration practice, I asked him, was Maori *ecological knowledge* actually used? He explained that his people's ecological knowledge never extended to restoration, because “everything was pristine in our ancient culture. We never had to restore, because we looked after it well.” No one present, myself included, challenged a statement which surely flies in the face of the Maori environmental history.

Those of us from white backgrounds rightly feel deeply shamed by our genocidal colonial history and its contemporary legacy. But we do nobody any favors by extending blanket exemptions from responsibility for ecological damage to all indigenous peoples. All races of *Homo sapiens* have caused environmental problems. They will only be resolved by mutual respect and rigorous and robust engagement with reality, not by politically correct sentiment and wishful thinking.

This is a thorny topic, but if it is not grasped soon by SERI it will be used by opponents as a stick with which to beat restoration as unscientific. Furthermore, sloppy thinking will only discredit the remarkable and valuable ecological traditions through which some indigenous people really do contribute to restoration science and practice. The use of balsa (*Ochroma pyramidale*) by the Lacandon Maya to accelerate tropical forest restoration is a case in point, and one of many (Douterlungne et al. 2008). But such cases need to be much more clearly differentiated from projects that are simply standard scientific restorations presented in an indigenous context, or by indigenous people.

Finally, one moment at the Perth event stands out as a warning to the board of SERI that the great achievements of the society's first 32 years, achieved at great personal sacrifice by many individuals, are not laurels that can be rested on. The speakers from the first afternoon's plenary symposium, among whom I was one, were empanelled on the platform to take questions on the theme “Restoration in a Changing World.” A woman from the back of the auditorium asked us something along the lines of “Why was every person on the platform a grey-haired male, if indeed we had any hair remaining?” An echo of recognition rolled around the hall. Our answers, perhaps mine especially—I bumbled on about the representation of women in restoration projects—only served to dig us deeper into the hole into which we found ourselves plunged.

I don't doubt that the organizer of this session, the distinguished SERI former director Don Falk, had, as he said, gone to considerable trouble to find women and younger people as presenters. Nonetheless, in conversations afterwards, I repeatedly encountered the impression that SERI is dominated by a smallish group of middle-aged men talking to each other.

This impression is largely misplaced, and as a neophyte to the society four short years ago I can say that I have found the society and its leadership to be extraordinarily accessible and helpful to newcomers. But impressions, false or true, do damage. One of the main challenges facing the new chairperson and executive director must be to attract a younger and more diverse membership and engage them at all levels in the organization. This is essential if SERI is to truly become the worldwide reference for what many, including this writer, believe to be the most important environmental movement of our troubled times.

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