

WG1 Genetics/Phylogeny

Membership (nominal and active)

co-chaired by Drs Faith, Yahara; members list unchanged from Implementation Plan doc

Summarize current activities

- July – discussions at the bioGENESIS SC meeting in Bali (WG1 activities form a bioGENESIS project)
- August - Two WG members are co-running a symposium at the Ecol Soc of America meetings, titled “From Microbial to Conservation Biology: Exploring Phylogenetic Beta Diversity as a Theoretical Tool Uniting Disciplines” with these relevant talks: Lozupone et al on large scale microbial diversity and Faith, Ferrier, Rosauer, on Phylogenetic beta diversity as a tool for monitoring
- We will use this meeting to create momentum for parts of the Implementation Plan
- Ongoing progress: AP BON components relating to key sites and selected species; held the 3rd Workshop on Asia-Pacific Biodiversity Observation Network – impressive buy-in from participants, particularly compared to initial meetings.
- Implementation of simple PD (phylogenetic diversity indices (“PD50” measure) through FISHBASE as example global-type data base – incorporates current ratings on vulnerability of species; also published COSUST “ecosystem services” paper

Priorities for 2010/11, deliverables, and milestones

- We delayed (until later in the year for submission) the preparation of *BioEssays* invited Review Article paper on WG1 plans/challenges, to be co-authored by WG1 members. (Topic: “an article on the topic of attempts to monitor genetic phylogenetic diversity at the global/regional scale”). This paper will be designed to attract partners
- PD mapping and EDGE – activating partnerships and work through Felix Forest on key plant groups assessments (milestone along the way is our paper in prep on PD methods for *Botanical Journal of Linnean Society*)
- We will pursue PD version of the Lens approach with one or two “early products” – 1) through Roseauer, perhaps Australian continental to parallel work with Simon on the “species level” Lens early product for Australia 2) through Lozupone et al, a microbial molecular based Lens type surface.
- late August: Faith at Kyushu, talk on GEO BON and AP BON for meeting which has potential new partners
- Sep-Oct: with Dr. Musters et al, Netherlands group, pursue the work implementing strategies for models and analyses linking abundance and genetic diversity. (GLOBIO links)

Identify barriers to progress and propose solutions

- loss of momentum a problem – everyone too busy
- need to link to existing partners and their activities, in a way that shows how GEO BON adds value to what they are doing; solution: will actively contact selected partners
- our attempt to link the WG1 Plan to a Dimensions of Biodiversity proposal did not work out (targeted lab group (microbial) was already tied to another consortium (BIOGENESIS members did however create a relevant proposal that may produce some synergies)
- The concept Note had suggested that the “Working Groups should pick one or two activities to focus on” We would nominate at least these two:
 - AP BON key sites and selected species
 - PD mapping and EDGE

Key partnerships that need to be developed

Mostly unchanged from those noted in Implementation Plan – perhaps two key partner-types are: 1) existing species level workers where models can value-add and extend to genetic, 2) genomics/barcoding groups.

Note - did little position paper (see Faith website and *Science* Online) on links from Barometer of Life to WG1 needs for genetics models; now need to pursue this through partnerships

Dan Faith, July 14, 2010