

Species Conservation - 3rd year option **REFERENCE LIST LECTURE 6/16**

Angelo (2012) *Deforestation rebounds in the Amazon* Nature news blog 21 Sept 2012 - in August 2012 522 square km of forest was clear cut and mostly next to roads. This is 220% of the August 2011 figure

Bailey (2013) *The Japanese knotweed invasion viewed as a vast unintentional hybridisation experiment* Heredity **110** p105-110 - looking at the relationship between invasions, vegetative propagation and hybrids

BGjournal (Journal of the Botanic Garden Conservation International) 2011 **8(2)** whole issue on Botanic Gardens and invasive species

BGjournal 2012 **9-2** whole issue Botanic Gardens and wild flora for rural livelihoods - poverty alleviation through the sustainable collection of wild plants

Alyokhin, A. (2011) *Non-natives: put biodiversity at risk* Nature **475** p36

Barnosky, A.D. *et al.* (2011) *Has the Earth's sixth mass extinction already arrived?* Nature **471** p51- a paper that tries to put some numbers on current rates of extinction and how this compares with the previous 5 mass extinctions - we have a problem!

Banwart, S. (2011) *Save our soils* Nature **474** p151 - soil is important

Billionnet (2012) *Solution of the Generalised Noah's Ark Problem* Systematic Biology **Nov 9th 2012** p1 - a model for the allocation of funds on the basis of Phylogenetic Diversity

Couvreur, Forest & Bill Baker (ex undergrad) (2011) *Origin & global diversification patterns of tropical rain forests: inferences from a complete genus-level phylogeny of palms* BMC Biology **9:44** - this shows that TRF is older than previously thought and that the diversity is a function of the age in part.

Cressy, D. (2011) *Uncertain sanctuary* Nature **480** p166

Durant (2012) *Forgotten biodiversity in Desert Ecosystems* Science **336** p1379 - desert conservation is grossly under funded when compared with its biology

Editorial (2011) *Ex factor* Nature **479** p268

Essl *et al.* (2012) Trade threat could be even more dire Nature **487** p39. The estimate that 30% of species are endangered by trade may be an underestimate

Finkel, E. (2010) *Parlous times for seed banks spell trouble for Australian agriculture* Science **329** p1591

Fischer, J. *et al.* (2011) *Conservation: Limits of land sparing* Science **334** p593 (and response)

Gaston (2012) *The importance of being rare* Nature **487** p46 - an important ecologist considering the importance of minor players in communities

Gewin, V. (2011) *Seed banks susceptible to sham samples* Published online 11 March 2011 | Nature | doi:10.1038/news.2011.154

Gibson, L. *et al.* (2011) *Primary forests are irreplaceable for sustaining tropical diversity* Nature **478** p378 showing clearly that there is no substitute for un-degraded primary forest

Gilbert, N. (2011) *Misconceptions about forest-dwellers* Nature Published online 15 June 2011 | Nature | doi:10.1038/news.2011.371

Gilbert, N. (2011) *Funding to help save plant diversity secured* Published online 18 March 2011 | Nature | doi:10.1038/news.2011.171 - \$10M for the ITPGRFA & Svalbard

Gilbert (2010) *Biodiversity hope faces extinction* Nature **467** p764 A preview of Nagoya - interesting with hind sight!

Gilbert (2012) *India's forest area in doubt* Nature **489** p14 over reliance on satellite data has underestimated the loss though illegal logging

Godfray, H.C.J. (2011) *Food and Biodiversity* Science **333** p1231

Hector, A. (2011) *Diversity favours productivity* Nature **472** p45 - complex environments require a diverse community of complementary species

Hocking, M.D. *et al.* (2011) *Impacts of salmon on riparian plant diversity* Science **331** p1609 - increasing numbers of salmon makes the river bank soil richer and thereby reduces the diversity of the plant species there

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- Huffpost Green (2011) *Biodiversity on Earth plummets. Despite growth in protected areas* www.huffpost.com/2011/07/30/richness-of-life-on-earth_n_913959.html - interesting graphs
- Hulme (2012) *Invasive species unchecked by climate* *Science* **335** p537 - a comment on a previous paper (ref in this letter) that states that climate change is faster than migration except for invasive species - double wammy
- Hvistendahl (2012) *Turning over a new leaf in China's forests* *Science* **337** p26 - the role of local people again
- Isbell, F. *et al* (2011) *High plant diversity is needed to maintain ecosystem services* *Nature* **477** p199 - a classic
- Joppa *et al* (2011) *How many species of flowering plants are there?* *Proc Biol Sci* **278** p554-559 with a reply from Laurence & Edwards (2011) *The search for unknown biodiversity* *PNAS* **108** no.32 p1271-2 - a commentary on the Joppa paper on estimating the number of species that are out there
- Kerr (2012) *More than one way for invaders to wreak havoc* *Science* **335** p646 Invasions can slow the rate of speciation
- Kew Magazine (Winter 2010) *Plants go into the red* - Kew work indicates that 20% of plants are threatened with extinction - 80,000 species (Kew Website)
- Koch *et al* (2012) *Put soil security on the global agenda* *Nature* **492** p186 - we need to know more about soils
- Kondo *et al* (2012) *Not ancient relic: the endemic Livistona palms or arid central Australia could have been introduced by humans* *Proc. R. Soc B* published on line 7 March 2012 - this shows that a species previously credited to ancient Australian flora is much younger than thought showing the value of molecular data and not making assumptions <http://dx.doi.org/10.1069/rspb.2012.0103> (2012) also in Zielinski in *Science* 6th March 2012 Ancient palm not so ancient after all.
- Kowalchuk (2012) *Bad news for soil carbon sequestration* *Science* **337** p1049 - the release of CO₂ by fungi in the soil may reduce the value of soil as a carbon sink Also in Cheng *et al* *Science* **337** p1084
- Laurence *et al.* (2012) *Averting biodiversity collapse in tropical forest protected areas* *Nature* **on line** - lots of data on the drivers for loss of biodiversity
- Lewinsohn & Cagnolo (2012) *Keystones in a tangled bank* *Science* **335** p1449 a commentary on Stouffer *et al* (2012) which highlights the importance of individual species in community conservation - even the minor players are important
- McKinnon & Taylor (2012) *Species choked and blended* *Nature* **482** p313 - a bit obvious but new niches appearing propels evolution and the reverse causes extinctions
- Naeem *et al.* (2012) *The functions of biological diversity in an age of extinction* *Science* **336** p1401-1406 - a big paper that tries to link conservation with food security and all the other issues - Summary in *Cardinale Science* **336** p553 - how much diversity do you need to maintain the productivity of ecosystems - models for linking diversity-function relationships
- Nichols (2012) *the legacy of lonesome George* *Nature* **487** p279 - the conservation of tortoises on the Galapagos but the data is not good even in this flagship region
- Palmer & Febria (2012) *The heartbeat of ecosystems* *Science* **336** p1393 which indicators of ecosystem structure and function must be measured to assess ecosystem health
- Pennisi, E. (2010) *Tending the global garden* *Science* **329** p1274 - the role of BGs & Arboreta in plant conservation
- Parfitt, T. (2010) *Pavlovsk's hopes hang on a tweet* *Science* **329** p899
- Persha, L. *et al.* (2011) *Social and ecological synergy: local rule-making, forest livelihoods, and biodiversity conservation* *Science* **331** p1606 - increasing the role of local people increases the chance of conservation programmes working
- Phalan, B. *et al.* (2011) *Reconciling food production and biodiversity conservation: land sharing and land sparing compared* *Science* **333** p1289 - land sparing is better for the conservation of trees and birds but birds fared better than trees in land sharing
- Powell *et al* (2013) *Invasive species have scale-dependent effects on diversity by altering species area relationships* *Science* **339** p316 - this paper suggests that extinctions caused by invasive species are relatively rare
- Prentice, I.C. (2010) *The burning issue* *Science* **330** p1636 - good data on biomass burning in the past 2000 years and it is lower now than at any time in the past 2000 years
- Qiu, J. (2011) *China faces up to 'terrible' state of its ecosystems* *Nature* **471** p19

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- Rangel (2012) *Amazonian extinction debts* Science **337** p162 - how many species are headed for extinction as a result of past and future deforestation in Brazilian Amazon - a summary of this paper Wearn et al Science **337** p228. The extinction debt is the species that are not yet extinct but inevitable species that will become extinct
- Regalado, A. (2010) *Brazil says rate of deforestation in Amazon continues to plunge* Science **329** p1270
- Rull, V. (2011) *Origins of biodiversity* Science **331** p398 (and response to the paper)
- Scherber, C. et al. (2010) *Bottom-up effects of plant diversity on multi-trophic interactions in a biodiversity experiment* Nature **468** p553 - plants are important for biodiversity at other layers
- Schmidt, M.W.I. et al. (2011) *Persistence of soil organic matter as an ecosystem property* Nature **478** p49 - how little we know about soils
- Science News **337** p 274 \$2.1M to manage a new 10 million hectare conservation zone in Northern Territories
- Silvertown (2012) *Experimental investigation of the origin of fynbos plant community structure after fire* Annals of Botany **110** p1377 - fire effects are related to the water content of the soil
- Simberloff et al (2011) *Non-natives: 141 scientists object* Nature **473** p36 - three letters arguing against Davis et al who claim that non-natives are not as big a problem as we fear - powerful arguments
- Speziale, K. and Lambertucci, S. (2010) *A call for action to curb invasive species in South America* Nature **467** p153 - legislation is required
- Storch (2012) *Universal species-area & endemics-area relationships at continental scales* Nature on line - estimates for biodiversity in large areas can be calculated accurately from small samples
- Stone, L. (2011) *Waltz of the weevil* Nature **470** p47 - *Salvinia* control in Australia
- Stouffer et al (2012) *Evolutionary conservation of species roles in food webs* Science **335** p.1489 - a paper that proves the obvious: conserving distinct species groups is important if communities are to survive as the different species contribute different roles.
- Strauch & Eby (2012) *The influence of fire frequency on the abundance of *Maerua subcordata* in Tanzania* J P. Ecology - increased fire frequency increases the chance of an invasion
- Strain (2012) *Researchers set course to blockade ballast invaders* Science **336** p664 - engineering solutions to killing species in ship water ballast
- Tollefson, J. (2011) *The roadless warrior* Nature **480** p22 - an argument for controlled oil & gas production in un-degraded woodland without roads - roads are the problem
- Tollefson (2012) *Brazil set to cut forest protection* Nature **485** p19 - interesting statistics
- Vaidyanathan, G. (2011) *Counting the carbon cost of peatland* Published online 7 March 2011 | Nature | doi:10.1038/news.2011.139 - loss of peat & release of CO₂ when palm oil is planted
- Walpole et al (2009) *Tracking progress toward the 2010 biodiversity target & beyond* Science **325** p1503 - looking at ways of making sense of the data and designing the necessary indicators of successful actions
- Willig, M.R. (2011) *Biodiversity and Productivity* Science **333** p1709 - diversity is good for productivity
- Yang et al (2013) *China's new leaders offer green hope* Nature **493** p163 - more politicians are now engineers raising hopes for better solutions for pollution control etc.
- Yashina et al (2012) *Regeneration of whole Siberian plants from 30,000-y-old fruit tissue buried in Siberian permafrost* www.pnas.org/cgi/doi/10.1073/pnas.1118386109 Proof of seed longevity at low temperatures also in Nature **482** p454
- Zarin (2012) *Carbon from tropical deforestation* Science **336** p1518 - calculating the emission of carbon from forest varies around the world