

The intrinsic value of geodiversity

Society used not to extend value to all sections of humanity or to both genders, but our ethics evolved. Later, ethics was extended by philosophers (e.g. Singer, 1981) to sentient living beings, and later to all of life (Taylor, 1986) in the term 'biocentrism'. However, for many years society's 'moral circle' got stuck; it failed to extend value to the non-living part of ecosystems, or what is called 'geodiversity'. This is despite Leopold (1949) extending the land ethic to *the land itself*. Indeed, the term 'geodiversity' is where 'biodiversity' was 30 years ago, with many not understanding it. Just as 'biodiversity' is a good term to cover various aspects of the richness in life, 'geodiversity' is a useful one to describe geological, geomorphological and soil features of interest (Gray, 2013). Because the components of geodiversity have heritage value, geodiversity therefore has *geoheritage* significance and plays a role in *geoconservation*. So geodiversity covers the diversity of geological strata and formations, the landforms created through weathering (geomorphology), the soils formed from weathering, and the landforms created by rivers.

Why should these have value in themselves? First, they are the substrate that supports life, for plants and animals live on (and in) geodiversity, and cannot survive without it. Secondly, while not 'alive' in the normal sense, geodiversity can be unique and can be degraded and destroyed. Consider the delicate calcite flowstone sculptures of caves, delicate fossil structures, highly erodible soils, or the thin projecting ironstone banding in the unique 'platy pagoda' rock formations I have written about (Washington and Wray, 2011). These are fragile structures, and many of them have great beauty.

Should intrinsic value be limited only to the living world? Those who argue for the broadest extension of our ethics speak of 'ecocentrism', which attributes value to both the living and non-living aspects of ecosystems. Rolston (2011: 118) argued:

Some values are already there, discovered not generated by the valuer because the first project here is really the natural object, nature's project; the principal projecting is nature creating formed integrity.

Surely that 'formed integrity' includes *both* the land and sea itself, as well as the life that is only possible owing to that land and sea? Society's ethics has evolved to acknowledge that women and people of all races and ethnicities have value. Later it evolved (largely) to accept that some animals, and then life itself, had intrinsic value. It is time for the next step: to accept that geodiversity, the non-living part of our world, also has intrinsic value, and hence must be treated with respect. Geodiversity is not just a bunch of 'resources' for human use, possessing only instrumental value. Rather, it makes up the wondrous fabric of the world around us. Now, ascribing intrinsic value does not mean you cannot necessarily 'use' something – indigenous cultures do both – but it does mean using geodiversity *with respect*, acknowledging the value of rocks, landforms and rivers for themselves. Which is as it should be. ■

References

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