PEGASUS U3A GEOLOGY/BOTANY GROUP August 2025 Newsletter

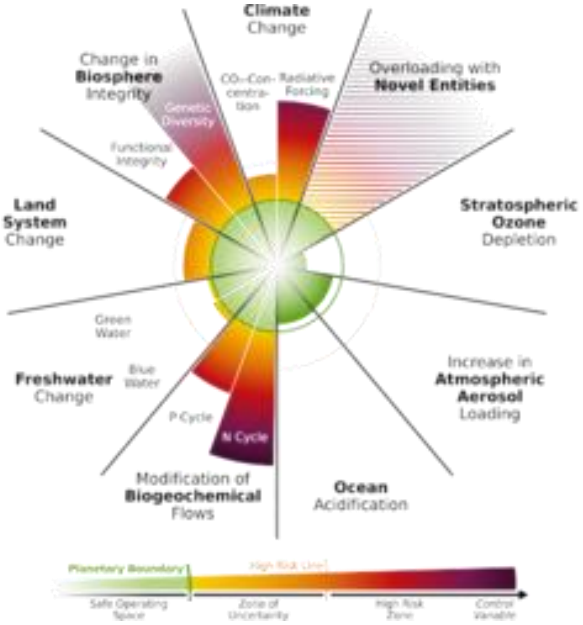
Hi,

First of all, I'd like to pay tribute to John Hayman who has just resigned from our Geo/Bot committee due to health issues. He has been a strong supporter of our group for many years giving us ideas for trips and coming on most of them. His wide knowledge of science and places of interest have been of great benefit to us all. I hope we shall still see him at meetings when he feels able to come. Best wishes John.
On a happier note, Leo van Dijk has agreed to come onto the committee, and his fresh ideas are already helping us plan for next year. Many thanks, Leo.

I hope to see a lot of you on Wed 20th at the Canterbury Mineral and lapidary Club, 110 Waltham Road at 10.30. They are very welcoming and want us to bring any rocks that they could identify for us.

Latest talk (The previous one on Iceland is over the page)

5th August **Weeds** Dr Charles Merfield



Dr Merfield started by showing us this diagram of the nine planetary boundaries that affect our earth, the orange ones bad. Most are driven by maximizing food production and profit. In Europe the UN has set 17 goals, and farmers are being paid to use good practices. In the 1920s agroecology was started, a revolution, leading to sustainable ways of farming. Now FAO are promoting agroecology with 10 elements to facilitate this transformation, and ministers of all countries have signed an agreement.

A large part of his talk was in trying to define a weed. Is it just a plant growing in the wrong place? At one time clover was a weed, but it can be good. Puha; is it a weed or good food? It is always a value judgment and science can't make them as they rely on experimental evidence. His definition of a weed is:

A plant growing in a specific place and time, causing significant harm immediately or in longer time.

All plants have some positive effects, so we need to weigh up the good and bad. Toxic, stinging, spiny, allergenic or ugly are considered bad. Native or exotic? It depends where you are. He has made up a phrase for plants that are non-crop or non-weeds; aliae plantae, the Latin for "other plants".

We need to think of our own gardens as ecosystems and stop using herbicides and insecticides, nitrogen rich fertilizer and use less compost. Minimise petrol driven tools and change to electric mowers. Grow lawns that need no watering and plants that can survive drought or deluges. Mix up vegetables using intercropping. Soil health relies totally on the diversity of living roots with bacteria and fungi like mycorrhizal. 40% of the nutrients from sunlight are transmitted into the soil by plants, leading to good microbes associated with organic matter. Humanity faces massive crises, and our gardening needs to play its part in this transition to more ecological approaches.

His website for more info is https://www.merfield.com/research/

Future dates

Wed 20th August	Visit to Canterbury Mineral and Lapidary Club, Meet at 10.30, 110 Waltham Road
Mon 1st Sept	Birds. Andrew Crossland

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Recent talk. 7th July **Iceland** Margaret Metherill

Margaret admitted that she wasn't a geologist, yet she gave us an amazing description of the formation of much of the scenery of Iceland.

Their three trips there were triggered by a book of Icelandic photographs showing views like these of rhyolite mountains. Iceland is only a 3-hour flight from London, has a population of only 384,000, about the same as Christchurch, is smaller in area than the North Island and has an inland desert. It has a 100m wide rift zone where the North American plate meets the Eurasian plate, giving a geothermal area.

The volcano Eyjafjallajokull erupted in 2010 and is due again soon. When it did, cold water met lava, forming glass-like ash which was blown across Scandinavia, Russia and much of Europe, disrupting air travel and coating fields so animals had to be brought indoors to avoid the chlorine in the ash.

Water comes in many forms, icecaps, glaciers rivers and seawater, ice domes and ice streams. There are many spectacular waterfalls to be seen everywhere. Some you can walk behind.

There are geysers too, but many are not as active as they used to be. However, Strokkur will blow about every 10 minutes, starting with a blue/green dome of water which grows and then erupts. The highest achieved was 170m.

Hot water from geothermal areas is used under streets to keep them clear of snow and ice. It heats homes and swimming pools. Reykjanes lava flow shows parallel lines of activity. As lava cools it may form columns of basalt or other shapes. Moss grows in cracks in the lava and Margaret has a jacket similar to that.

This was an excellent talk about a place that most of us will never see.