

Falklands soils under the spotlight

FOR most people, soils are of less interest than albatrosses, dolphins, whales, seals and penguins, however we do not always realise that what is under our feet is one of the most important natural resources on earth and one that we all ultimately depend on for life itself.

In fact, soils are the link between air, water, rocks and organisms and have many different functions such as temperature and moisture regulation, carbon and nutrient cycling, natural breakdown of organic matter and recycling.

Very importantly of course soil determines the habitat for most living things and their food. So a thorough understanding of the physical, mineral and chemical make-up of our soils helps us understand why certain plants and animals prefer particular locations instead of others and how we can best protect this valuable resource for future generations.

Our soils suffer many threats. Like living organisms, soils are affected by climate change and some types of soil, e.g. peat, play a role in addressing the overall climate change issue by "storing" carbon and preventing it getting into the atmosphere as carbon dioxide gas. It has been proved that, worldwide, healthy peatlands lock up and store more carbon than all other vegetation types in the world. Unfortunately, eroded peatlands release carbon into the atmosphere and, as reported by IUCN (<https://www.iucn.org/resources/issues-briefs/peatlands-and-climate-change>), approximately 6% of global anthropogenic (manmade) carbon dioxide emissions, which cause climate change, are from eroded peatland. Therefore, it's very important to reduce peatland erosion through restoration and careful management and overall, peatland restoration projects should be promoted as they can therefore bring significant emissions reductions. Of course it's also important to keep looking after healthy peatlands too!

The Falklands is already well aware of the importance of peatlands and erosion and, the Falkland Islands Government (FIG) has already taken some actions.

For example, the amendment



Collecting soil samples - Article and pictures by SAERI

of agricultural land improvement policy and the conservation of the carbon store in fragile soils are medium/high priorities of the Islands' Climate Change Mitigation Action Plan and align with the FI Biodiversity Framework. Similarly, Falklands Conservation and private landowners and land managers have trialled various types of restorations and land management plans, using tussac and other native plants, sometimes with the addition of sheep dung or dags, adopting either the holistic planned grazing system or the rotational grazing of sheep and cattle.

All of these initiatives must continue and Falklands farmers, who worked their land for generations, will provide a strong starting point with their local knowledge. However, to apply the lessons being learned more widely we need a deeper understanding about the type of soils we have and how to manage them properly to retain and perhaps improve their health for sustainable cattle and sheep grazing. The good news is that the Falklands now have a great opportunity to study their national soils. A two year Darwin Initiative Plus project is ready to start in April 2018 with the participation of SAERI (leader organisation), FIG, UK Falkland Islands Trust, the James Hutton Institute in Aberdeen, the Natural History Museum, the University of Magallanes in Punta Arenas and the Centre for Ecology and Hydrology. The team will be led by a project manager, based at the SAERI office, who will be starting around August.

This two year Darwin project will improve our knowledge of Falkland soils through undertaking a baseline survey of soils (landowners will be asked for permission before the start of the surveys), peatlands and drawing up criteria to assess erosion extent/risk. The outcome will be

an online data system for viewing the various maps generated by data collection and analyses (free internet access will be negotiated with Sure). Additionally this overlaying of maps will provide guides to interpreting the chemical/microbiological aspects of the soils and will assist policy makers, conservationists and land managers in minimising erosion risk, greenhouse gas emissions and maximising conservation of peatlands.

Throughout the two years, the project will engage with local stakeholders through workshops, meetings, presentations, and volunteer participation to the soil campaign. As it will be impossible to reach and sample every corner of the Falklands, satellite imagery will be used and combined with field data to create the national map of soils. We hope that many people will be interested in finding out more from soil scientists working on the project. Our wish is that by the time this project has been implemented those of you going out and about, will stop and look not only at the cute penguins and plants, but also at the precious soils under their feet!

Dr iLaria Marengo
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MOMES WITH MARK

think is part of a game.

Tuesday March 27 provides another chance to see **Red Sparrow**, and on Wednesday March 28 it's **Tomb Raider**. Finally, Thursday 29 March is a late chance to catch **12 Strong**, and observe Chris Hemsworth leading a special forces unit into Afghanistan. Stirring stuff, in many different ways. Check out the full listings on page 20.

My DVD recommendation of the week is **Thor: Ragnarok**. New Zealand director Taika Waititi brings a comedic sensibility to the Marvel universe, and delivers one of its most entertaining chapters. Cate Blanchett, as the Goddess of Death, is stuck with a rather ponderous villain role, but Jeff Goldblum is brilliantly insane as an evil dictator.



Tomb Raider (Warner Bros)

IT's a strong week for the ladies at the Phoenix, starting on Friday March 23 with the first showing of **Tomb Raider**. The new Lara Croft is played by Alicia Vikander, who you might have seen as the robot in *Ex Machina*. The plot follows Croft as she tries to survive on the island where her father disappeared. Whether tombs feature strongly, or indeed there is much in the way of raiding, remains to be seen. This performance is in 3D.

The 3pm showing on Saturday March 24 is **Peter Rabbit**, a new adaptation of the Beatrix Potter classic. Among the voices are James Corden and Margot Robbie. At 7.30pm you can catch **Red Sparrow**, a thriller starring Jennifer Lawrence as a Russian spy whose main weapon is a bewildering array of haircuts.

On Sunday March 25 the afternoon performance is **Early Man**, the new Aardman animation movie set in the really, really olden days. We follow our cave people heroes as they do their level best to resist the oncoming Bronze Age, mainly by trying to win a game of football. You'd think there was more required than that. Then at 7.30pm it's another chance to spend the evening with Lara Croft in **Tomb Raider**.

On the evening of Monday 26 March there's a performance of black comedy **Game Night**, in which Jason Bateman and Rachel McAdams get involved in a murder mystery that they initially

