## **Beautiful Bryophytes**

Dr Chris Cargill

The word bryophyte is the collective term for mosses, hornworts, and liverworts.

They are plants, scientifically classified within the Plant Kingdom and they are spore-producing, rather than seed-producing plants and are all without flowers.

Most bryophytes are small plants frequently overlooked because of their size but often found growing on many different substrates in bushland and urban environments alike. They clothe the surfaces of rocks and boulders, fallen logs and rotting wood, soils of all kinds, and even grow as epiphytes on the surfaces of living leaves or bark.

Bryophytes are survivors! They have been around for millions of years, amongst the first plants to colonise the land. They are also survivors of quite harsh conditions. They are unable to control their internal water content so as the environment dries, so do they. But as soon as water comes available, they quickly rehydrate and are able to function normally.

Bryophytes provide important ecosystem functions within their environments – including sequestering carbon, nitrogen and minerals, water conservation and as conservators of our earth providing a geoblanket over the surface of soils as part of biological soil crusts (BSC). BSC's are composed of many different organisms, such as fungi, lichens, algae and bacteria.

One of the common bryophytes making up these soil crusts is the liverwort *Riccia* which is found across Australia and across the world. It tends to like Mediterranean type climates and bare compacted soils to grow on. Australia has almost 60 of the 200 species found worldwide.

Recently a new species of *Riccia* that appears to like cooler climates and was first collected near Dangelong Nature Reserve has now also been located at the North Ridge Reserve in Cooma and also on Mt Canobolas near Orange. Its closest relative is a species found in the highlands of Lesotho in southern Africa.