Mycological Notes 3: Fungi associated with *Salix* along S. Island riverbanks.

Jerry Cooper, June 2012

When I first arrived from the UK and settled in Canterbury I was struck by the (mycological) familiarity of the Christchurch urban environment versus the alien quality of the mountain beech and podocarp forests. Joining the two are our stunning braided river systems, usually infested along their edges by willows. I was quite surprised to learn that many had been deliberately planted to stop erosion. Alder and Willow 'Carrs' back in the UK were always a favourite place to go and look for interesting fungi and so it was natural I should look at them here. In general I've found that the closer you are to urban areas then the greater the diversity of fungi. Amongst the diversity was always a common set of ectomycorrhizal fungi. Recently I began to ponder how far these fungi have travelled with their willow hosts and so started looking at willows in high country places such as Cragieburn, and along the edge of Lake Pearson and again found the same set of fungi, next door to our 'pristine' mountain forests. Most recently I was driving back from the foray at Riverton across Lindis Pass. If you look at a distribution of fungal records in New Zealand then this area is a big empty hole. Of course there aren't many forests – but there are rivers and there are willows. So I stopped the car and clambered down a bank and within a few minutes found fruitbodies of some of the same fungi. I wonder if these ectomycorrhizal fungi have had some hand in assisting the spread of the willows? I also wonder if some have used this highway and 'jumped the fence' into the beech forest? From looking at ectomycorhizal fungi in our urban environments it appears that introduced EM fungi such as some species of *Russula*, *Amanita*, *Xerocomus* and *Paxillus* which have a restricted range of hosts in their home environment, seem to lose their inhibitions and start partnering up with non-standard hosts. Perhaps an example of enemy release –as the ecologists like to call it.

Salix associated EM fungi

Cortinarius sp.

Known from the banks of the Waimakariri and Lindis Pass

Laccaria pumila

Known from Lake Pearson, Lindis Pass and many urban locations (along with *L. tortilis* so far only known from urban areas)

Hebeloma sp.

Known from Lake Pearson, Waimakariri, Kaituna valley, Cragieburn, Bottle Lake. Possibly *Hebeloma hiemale*.

Naucoria salicis

Only known from urban areas around Christchurch. More EM species in this genus are associated with Alders in urban habitats.

Russula laccata

Known from Lindis Pass, and Canterbury rivers. Identity confirmed by sequence analysis and also close to entries labelled *Russula norvegica* which is a synonym suggested in the literature.

Scleroderma bovista

Known from the Waimakariri.

Thelephora c.f. terrestris

Known from Canterbury rivers.