

## *Rhynchospora capitellata* at Whakamarama

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*Rhynchospora capitellata* is an American sedge first recorded at Whakamarama nearly 30 years ago (Miller 1996) and has not been reported from elsewhere although another species, *R. globularis*, was recorded by Esler about the same time at Waikumete Cemetery, West Auckland, and in Northland. Both species are widespread in eastern USA and in California in the west.

When I arrived in Tauranga in 2000, I was preparing a field guide to rushes and sedges and accordingly promptly and readily located the sedge on the Leyland O'Brien Tramline Track at Whakamarama. This track in the Kaimai Ranges links Whakamarama Road with the North–South Track, following the old Leyland O'Brien tramline. Subsequent explorations around the Kaimais and elsewhere in the Bay of Plenty have not located it anywhere else.



**Figure 1.** *Rhynchospora* population at main clearing lining the track. Mature plant (tall and straggly) at right foreground. *Photo: Graeme Jane.*

More recent explorations at Whakamarama have shown it to be confined to a very small area on the Leyland O'Brien Tramline Track. It is not on other tracks or side clearings, nor on informal 4-wheel drive tracks using old logging roads nearby. *Rhynchospora* is only present at four widely separated localities from the junction of the Leyland O'Brien tramway with the recently re-opened extension, which is part of the Pa Kereru loop, to the main river crossing of the Ngamuwahine River about 3 km down river. The first three are old logging camp or skid sites.

The first infected section is from the junction signpost with increasing density to the first main clearing (-37.774377, 175.955652) and fading to the boundary. Once the track enters closed forest it is absent for the next 15 minutes to the next main clearing (-37.771702, 175.956161, Figure 1) when it abruptly re-appears. Even in small openings between these two clearings it is absent. This second area is the largest population. It densely lines the track through the clearing and marks out a spur at mid-clearing that leads to a nice camp site by the river. It is then absent for another 15 minutes to the next main clearing (-37.781063, 175.958557, Figure 2).



**Figure 2.** Third clearing, two small patches. *Photo: Graeme Jane.*

Here there are two very small patches which have largely remained unchanged for at least 10 years. Finally, there was one very small patch of a few plants in a small opening just after a stream crossing about 10 minutes further down. (-37.766788,175.957169, Figure 3).



**Figure 3.** End of population at a small opening, plants too small to see in photo on track edge. Photo: Graeme Jane.

Plants of *Rhynchospora* are found only along the track sides and restricted to less than 70 cm from the centre of the tread line (Photo 1). The plants appear to prefer damp conditions and can't stand competition for light. In the main population pig rooting (very evident 10 years ago) seems to have created ideal conditions for their propagation and spread in the middle of the area but not on their side tracks.

Since the area has been adopted by a volunteer group (Friends of the Blade) and pest control has been implemented, the main grass clearing has become overrun by blackberry and rank grass. but it remains along the main track and still survives along the spur which is being encroached by blackberry. Also, spread has extended a little, back towards the Blade carpark end clearing, apparently with recent track work and sign placement.

This is a very odd distribution. Plants are not present at the carpark end but about 15 minutes from it. There the first population is sparser than that at the second clearing and the last two patches were very small. Also, small apparently suitable clearings between the major clearings lack *Rhynchospora*.

In contrast, *Carex demissa* has appeared over the last 10 years and is spreading rapidly along the track edges. It can be quite common, especially along the track where it crosses small clearings as well as the larger clearings.

If trampers or other visitors or pigs were spreading the species it should be present in the smaller clearings between the main sites, especially at stream crossings, but it is not there. It is almost as if the species has been spread by track clearance equipment such as line trimmers, with seed sticking to the guard then being released by a burst to cut something. The spread back toward the carpark seems to have been a result of disturbance caused by replacing a small bridge and placing of the junction sign.

Hence my message is beware of line trimmers or similar equipment spreading weeds in sensitive areas. Also, pigs, with their ploughing activities, can create ideal conditions for weed spread.

#### References

Miller, E.M. 1996: *N.Z. Bot. Soc. Newsletter* 43: 7-8.