



# Bug's salt solution

Verity Edwards

EXCREMENT from a tiny spittlebug living in the green pastures of Scotland could help find the answer to rising salinity levels in Australia's river systems.

University of Western Australia graduate Natasha Teakle, working in a laboratory in the backblocks of chilly Glasgow thanks to a South Australian Research and Development Institute scholarship, is studying spittlebugs for salinity solutions.

The spittlebug, smaller than a fingernail, is being used to measure the salt tolerance of the *Lotus glaber* plant, a green leafy legume.

The tiny creature punctures the stalk of the *Lotus glaber* and pumps the sap through its body, likened to foaming milk in an espresso.

"By collecting their excreta, we have a way to accurately measure the concentration of ions in the plant xylem under salt stress and so can try to understand the mechanisms behind salt tolerance in *Lotus glaber*," Ms Teakle said.

Ms Teakle said the research could help Australia's long-term salinity problem. "It is commonly understood that the main factor contributing to Australia's salt problem has been the removal of the native perennial vegetation and the subse-



Natasha Teakle

quent rising water table bringing salts to the surface," she said.

While planting trees near river systems may be a solution, Ms Teakle said many farmers were reluctant to increase tree plantings. However, they could be amenable to planting leafy legumes, which would also provide valuable stock feed.

"You're never going to be able to convince a farmer to plant trees that he can't make money from," said Ms Teakle, a farmer's daughter. "The fact that *Lotus glaber* is a pasture legume means it can also provide a good source of feed to grazing livestock, and being a perennial, it can also help lower the water table and hence reduce salinity." She said planting legumes that required little water could prove a solution in areas including the farm lands along the ailing Murray River.

Applications for the institute's A. W. Howard Fellowship travel grants, of which Ms Teakle was a beneficiary last year, close on March 30.