

Gold doesn't grow on trees, but lies beneath them

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Gold-prospecting companies collect soil samples from deep in the ground in their search for new deposits, but a quicker and cheaper way is studying the leaves of trees, scientists in Australia said Wednesday. Melvyn Lintern, a geochemist with the government-funded Commonwealth Scientific and Industrial Research Organisation (CSIRO), said analyzing leaves first rather than going to the huge expense of drilling core samples was a technique that had already been harnessed. The method developed by his Perth-based research team has led to investment in two Australian mines with the potential to produce billions of dollars' worth of gold. Lintern, whose research was funded by some of the world's biggest gold producers, has shown that trees sitting on gold deposits suck up minuscule amounts of the precious metal.

This is especially true in times of drought, when they seek moisture at great depths. "Acacias and eucalypts are deep rooted and able to pick up trace amounts at quite incredible depths," he said. "They are bringing up gold from 30 metres — the equivalent of a 10-storey building." The trees treat the gold as toxic and store it away in their leaves for easy disposal. Shedding the leaves sheds the potentially toxic gold.

"This is the key finding," Lintern said. "The speculation was that the gold was on the leaves after being blown there in the wind, but we've proved the gold is actually in the leaves of the tree." By sampling vegetation rather than drilling for soil samples, prospectors can find deposits more cheaply. "You can do a first pass using vegetation," he said. "The other thing is the possibility of opening up new ground. For example, arid areas like sand dunes have been notoriously difficult to explore using drilling." Work his team has done on eucalyptus trees growing on 8-metre sand dunes has found gold accumulating not just in leaves but in roots as well.

Lintern said the findings were authenticated using a football-field sized synchrotron — a particle accelerator — in Melbourne, where images of the gold were produced. The deposits are minute — you would need the particles from 500 trees to produce a wedding ring. "It's not that we want people to harvest the trees in any way but use them as windows into what's under them," Lintern said. — **DPA**