

The Queen reigns supreme this wildflower season

September 24 2015, by Cristy Burne, Sciencenetwork Wa



The northern Queen of Sheba (*Thelymitra pulcherrima*), taken in the Eneabba area. Credit: Gail Read

Seven years after propagating its rare seeds, Kings Park scientists are celebrating the first flowers in their population of the elusive southern Queen of Sheba orchids (*Thelymitra variegata*).

Researcher Dr Belinda Davis says the flowering event is incredibly

exciting.

"All [orchids](#) start their first years as small protocorms, basically a leaf attached to a very small tuber," she says.

"We've watched as each summer they go dormant, to a tuber, then each year they grow back again, putting up little curly leaves.

"This is the first year they've put up a flower spike."

Exceptionally uncommon in the wild, Queen of Sheba orchids can only thrive with a lucky combination of perfect timing, perfect soil and perfect pollination.

"Orchids are more intricate in terms of their interaction with their ecosystem than any other plants," Dr Davis says.

"They have relationships with below-ground fungi, to get nutrients...and to germinate.

"Above-ground they form relationships with their pollinators."

These relationships, Dr Davis says, can be highly specialised, with some orchids relying on sexual lures to trick pollinators into trying to mate with their flowers, while others use UV signals to attract attention.

The Queen of Sheba's technique, it seems, is playing hard-to-get, then offering suitors a sweet nectar reward.



The Queen of Sheba. Credit: Belinda Davis

"The flowers only open on warm sunny days, the rest of the time they stay closed," Dr Davis says.

"This encourages pollinators to visit in large numbers during one event, increasing the likelihood of depositing pollen from a neighbouring Queen of Sheba."

Dr Davis' research indicates habitat loss, rather than pollination woes or missing fungi, is limiting the spread of WA's native orchids.

"Clearing land for housing or agriculture means there's only pockets of bushland left where they could possibly colonise," she says.

Dr Davis says she is enjoyed watching and waiting each year as the baby Queen of Sheba orchids have grown from propagated seeds, each painstakingly collected with their requisite fungi.



The Queen of Sheba. Credit: Gail Read

"One day, hopefully we can bump up our population a bit more; it would be amazing to put them on public display," she says.

Till then, she encourages wildflower enthusiasts who may be out this wildflower season to take care in their hunt.

"It's a case of being lucky and keeping an eye out," she says.

"We want people to appreciate orchids in their natural habitat, but some populations are heavily visited, and unfortunately occasionally plants do

get taken.

This article first appeared on [ScienceNetwork Western Australia](#) a science news website based at Scitech.

Provided by Science Network WA

Citation: The Queen reigns supreme this wildflower season (2015, September 24) retrieved 28 April 2024 from <https://phys.org/news/2015-09-queen-supreme-wildflower-season.html>

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