

People tried burning, bulldozing, and poisoning the prickly pear. But it grew back so fast, these efforts didn't seem to make any difference. Each year the infestation grew worse, until a group of scientists brought an insect to Australia named *Cactoblastis*.

The caterpillar of the *Cactoblastis* moth eats the inside of the prickly pear pads. Within just a few years of releasing the moth, the prickly pear infestation was no longer a problem.

This story is one of the most famous and successful examples of biological control.

Scientific name *Cactoblastis cactorum*

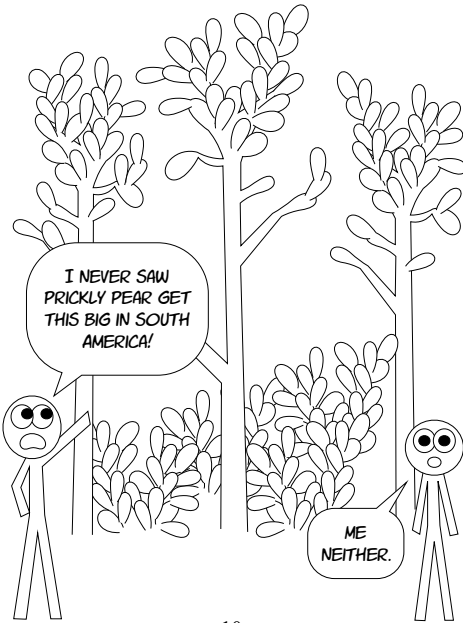


THE LARVA:  
ORANGE CATERPILLAR  
WITH BLACK STRIPES



THE ADULT:  
GREY-BROWN PLAIN  
LOOKING MOTH

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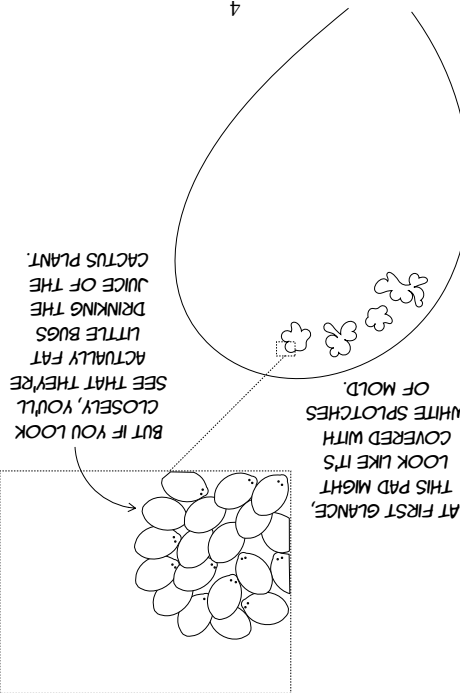


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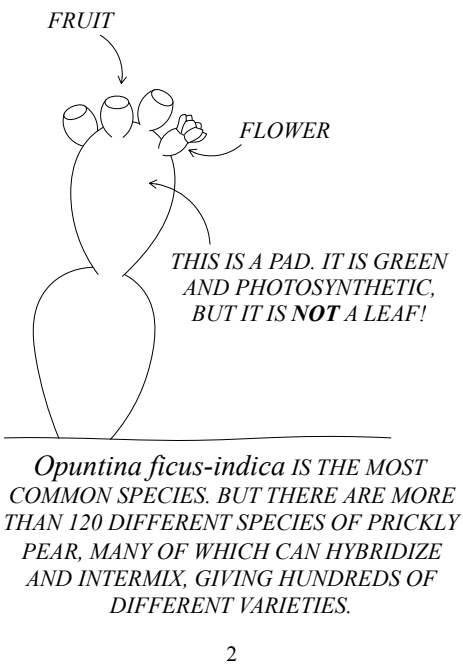
It grew into dense spiny forests that were enormous. Sheep and cattle couldn't eat the cactus because of the spines, so the cactus ruined the land ranchers were using to graze their animals.

At the height of the prickly pear infestation, it covered more than 60 million acres of land. *That's bigger than the entire country of Great Britain!* It was spreading so quickly, that each year an additional *TWO MILLION* acres of land were being covered in prickly pear. Entire farms and houses were abandoned because they'd been swallowed up by the cactus.

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In addition to being a food for people, the prickly pear is rather tasty to a certain bug called cochineal (scientific name *Dactylopius coccus*).

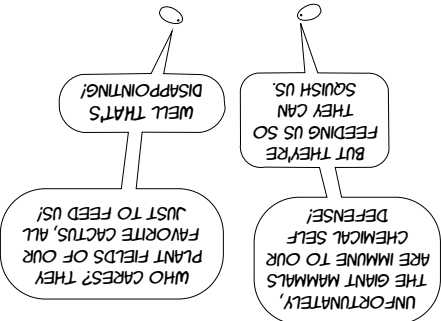
This little scale insect happens to be one of the main sources of red dye. The Aztec and Maya people used it to dye cloth, and today it is still used in candy and cosmetics and clothing.

If you've ever eaten anything colored with E120, Natural Red 4, carmine or cochineal, then you've eaten the (purified) remains of the cochineal insect, which in turn eats the prickly pear cactus.

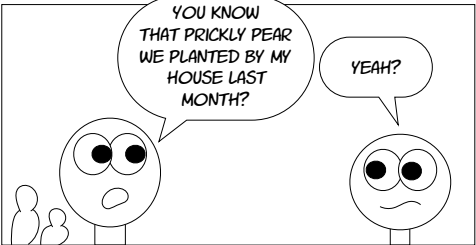
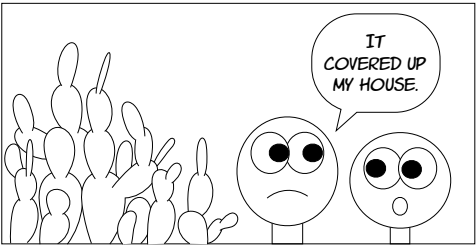
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And there you have a true story that starts and ends with insects:

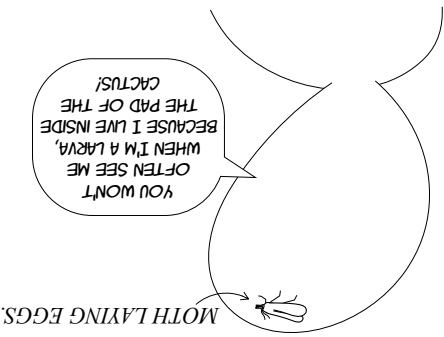
### THE COCHINEAL



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A very hungry caterpillar that can eat a lot of cactus. Within just a year of releasing the *cactoblastis* in Australia, more than 7 million acres were cleared of cactus.

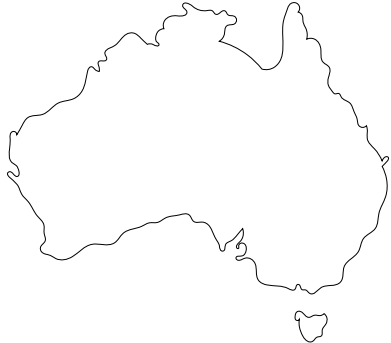
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In the late 1800s, the prickly pear was brought to Australia by people who wanted to produce cochineal. The concept of an invasive species didn't exist at this time. There were no regulations about transporting plants from one area to another.

So several farmers took prickly pear plants from South America, put them on a boat, and carried them to Australia. The plants were used to set up cochineal farms, but the cochineal kept getting eaten by other insects. After a few years, farmers gave up on the idea of cochineal. The little bug just didn't do well in Australia.

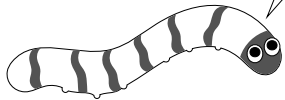


## The BUG that saved AUSTRALIA



A true story

INSECTS ARE AWESOME!



B	A	A	X
B	C	C	D
F	E	E	D
E	G	G	X