

**I**F YOU CHOPPED two of its legs off and saw it on a dark night you could be forgiven for thinking you were looking at a kiwi," says Morris of the long-nosed echidna (*Zaglossus bruijnii*), a primitive monotreme mammal from the mountains of New Guinea.

The echidna also resembles the kiwi in being nocturnal, burrow-dwelling, an exclusive earthworm eater, and having a long snout with nostrils at the tip and small poorly-sighted eyes.

The kiwi has taken on many mammalian characters: hair-like feathers, whiskers, equivalent body temperature, and comparable size and development of embryos. "Evolution on islands can be carried to such bizarre extremes," says Morris, "that primitive mammals and primitive birds can look more like each other than most other mammals and birds."

**I**N THE RICHER ISLAND ecosystem of the Poor Knights Islands, Pacific geckos add to their insect diet with fruit, and nectar from flowers like pohutukawa. New Zealand reptiles once played a much greater role in forest ecology than we give them credit for today. On the Poor Knights – which boast a total of eight skink, gecko and tuatara species – reptiles pollinate forest flowers and distribute seeds. Coprosma and kawakawa seeds are suited to passing through the gut of animals and rough scales under geckos' chins can carry pollen for up to 24 hours. "Island ecosystems can operate in a way that is fundamentally different from our understanding of how those on continents function," says Morris.



**T**HE SPECTACULAR Haleakala silversword (*Argyroxiphium sandwicense*) is descended from a nondescript group of small herby to scrubby, sticky, daisy-like plants known as tarweeds which grow on the Pacific coast of America. Their seeds, transported to Hawaii by wind or on the plumage of birds, have evolved into a varied range of species – creeping lianes, shrubs, close-knit mats, large-leaved herbs and cabbage tree-like plants. The Haleakala silversword flowers only once, taking five to 25 years to gather sufficient moisture from volcanic soils to send up a magnificent spike two metres tall, covered in purple-red daisy flowers. While bearing no physical resemblance to its ancestors it can still hybridise successfully with mat-forming tarweeds native to the California coast.