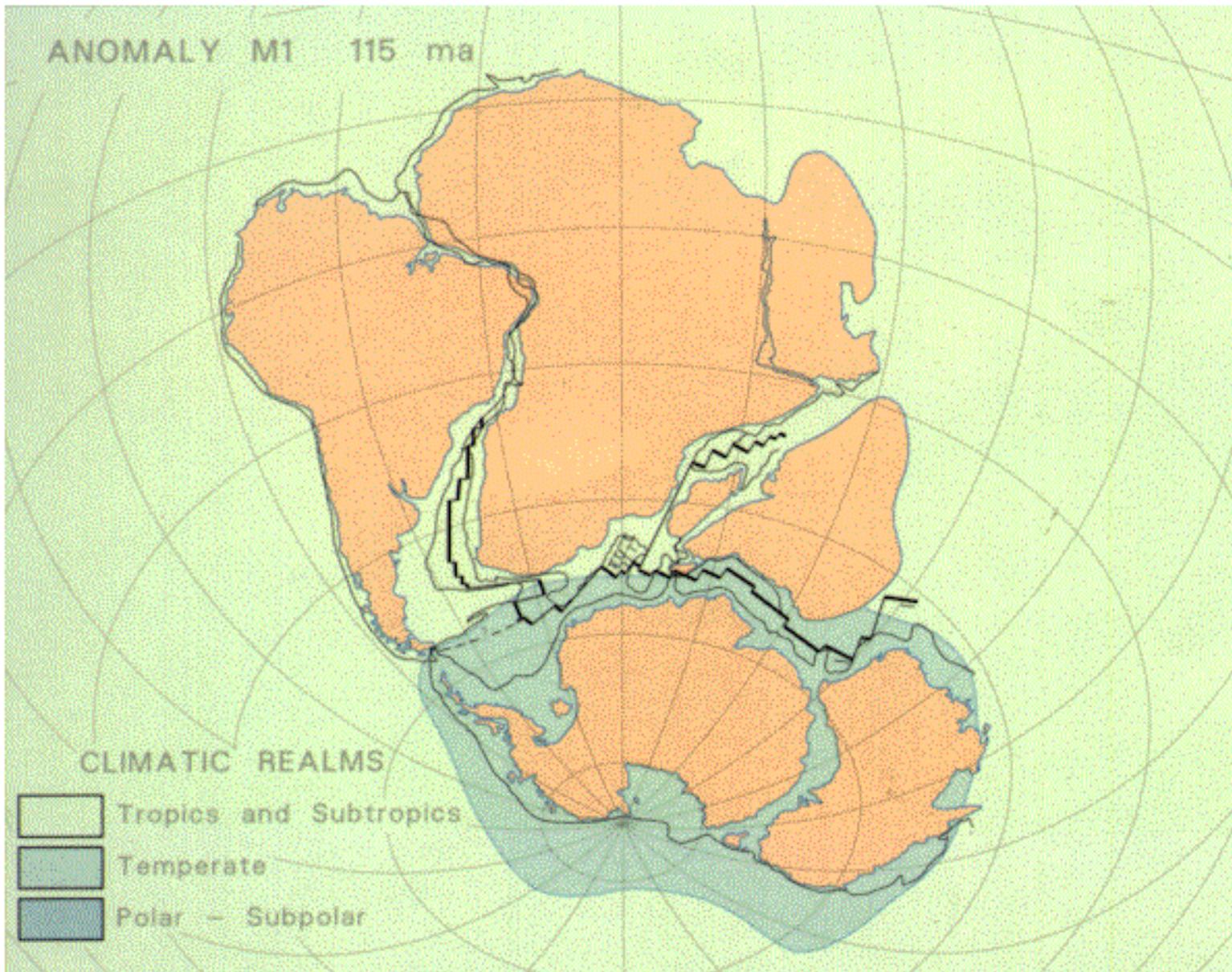


The Lost Ark

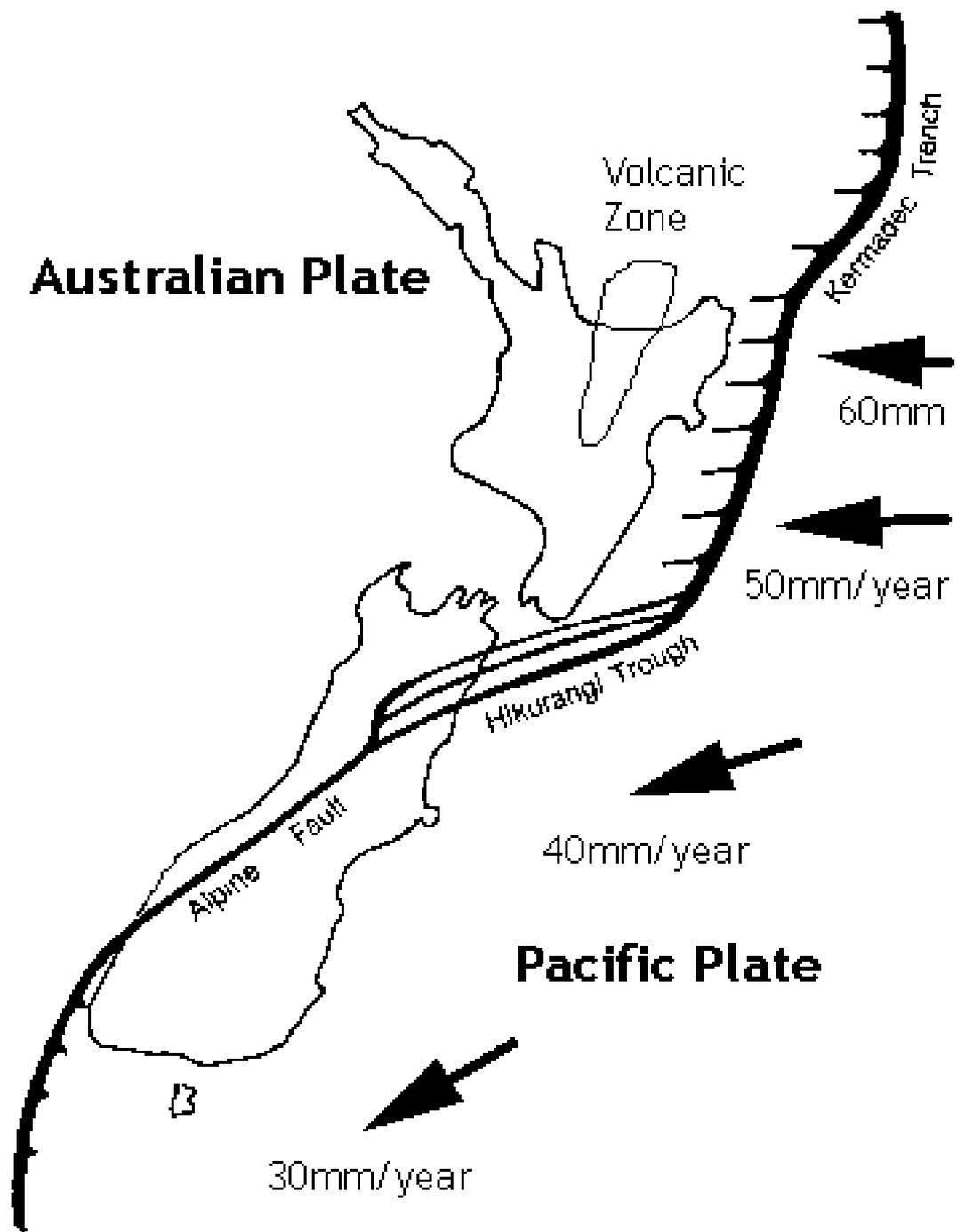
- About 80-100 million years ago, New Zealand drifted away from the massive supercontinent of Gondwanaland into the South Pacific.
- Since then, a unique flora and fauna has evolved, with a large number of beautiful native birds and plants, as well as direct descendants of prehistoric wildlife, including the tuatara, weta, and giant snail. As *Time* magazine said, New Zealand is an 'ultimate storehouse for discontinued zoological models'.
- Before humans settled in New Zealand, it would have been an extremely noisy place! Large tracts of lush native bush supported an incredible variety of bird life. As they evolved, wings became unnecessary for some birds, as they had no natural predators to fly away from. As a result, several of New Zealand's native birds became flightless, including the kakapo parrot, the kiwi, the takahe, and the world's largest bird, the (now extinct) moa.



TRIÁSICO
Hace 200 millones de años



<http://www.searchanddiscovery.com/documents/97019/dispersion.gif>



Fauna of NZ

- The **animals of [New Zealand](#)** have a particularly interesting history because, before the arrival of humans, probably less than 1,300 years ago, the country was completely free of mammals, except those that could swim there ([seals](#), [sea lions](#), and, off-shore, [whales](#)) or fly there ([bats](#)).
- This meant that all the ecological niches occupied by mammals elsewhere were occupied by either insects or birds, leading to an unusually large number of flightless birds, including the [Kiwi](#), the [Moa](#), and the [Kakapo](#).
- Because of the lack of predators even the bats spend most of their time on the ground. There are also about 60 species of [lizard](#) (30 each of [gecko](#) and [skink](#)), and four species of frog (all rare and endangered).

Native birds

- Before people arrived, New Zealand was a land of birds. Night and day the forests were alive with rustlings, calls, booms, whistles and hoots. There were over 120 species of geese, ducks, rails, moa, parrots, owls, wrens and other perching birds.
- Around 70 of these were found only in New Zealand. Almost a quarter were nocturnal, and many were giants. The huge, flightless, foliage-browsing moa occupied niches usually the reserve of mammals, while the tiny wren scampered about on the ground like a mouse.
- The moa, a huge bird that was once common in New Zealand, has become a national symbol of extinction, much like the dodo.
- Birds such as the weka, kea and kākāpō evolved in splendid isolation. They had few natural predators apart from the giant Haast's eagle, which was swooping down on the very largest moas about 1,000 years ago. It is likely that it was still alive when the Māori arrived. In Māori oral lore this gigantic raptor was known as the hokioi – reputedly after the sound of its call.

Tuatara — ‘Living Fossil’

- A reptile with links to the dinosaur, the native tuatara is found mainly on islands around New Zealand’s coast.
- The tuatara is a unique relic of the past — the only beak-headed reptile left in the world. Every species of this reptile family, except the tuatara, died out around 65 million years ago.
- Tuatara can live for over 100 years, and were once found throughout New Zealand. Now they are only found on protected offshore islands - around 30,000 live on Stephens Island in the Marlborough Sounds. Only growing up to 24cm in length, tuatara are not a threat to humans.

Haast's Eagle

- Haast's eagle was the largest eagle ever to have lived. Any larger, and it would not have been able to fly.
- It was also unusual because it was the top predator in a unique eco-system or food chain - one which was made up of only birds.
- Bones of the eagle have been found in more than 50 places, mostly in the east and south of the South Island. Some are estimated to be only 500 years old, showing that eagles and humans were alive together. Other bones are up to 30,000 years old.
- Compared to other birds of prey, it had short but powerful wings for the size of its body, with a wingspan of up to 3 metres. This probably meant that it "flapped" rather than "soared". .
- It also had extremely strong legs, with enormous talons of up to 60 mm long, and a vicious beak it used to tear flesh from its prey.
- Haast's eagle probably hunted by watching for prey from a high perch and then swooping down onto its victim
- It is estimated that the combined strength of the legs, feet and claws would have meant that Haast's eagle would be able to kill a moa weighing 200 kilograms.

Huia

- The huia had black feathers, with white on the tips of the tail feathers, and a bright orange wattle. The huia used its beak to dig into rotten logs or under the bark of trees for grubs and other insects.
- It was well known for the difference in bill or beak size - the female's curved bill could grow to up to 104 mm, one-third longer than the male's shorter straight beak (about 60 mm). The bird itself was about the size of a magpie.
- 19th century naturalists observed that the huia was found, usually in pairs, in the forest canopy and also on the forest floor. It moved about more on foot than flying. The name "huia" is thought to come from the sound the bird made, a shrill whistle.
- It was once found throughout the North Island, but by the time of European settlement it was only in the lower half of the island, suggesting that numbers had declined after the arrival of the Māori and before the arrival of Europeans.
- The survival of the huia, whose numbers were already declining, was threatened by the introduction of predators such as [rats](#), [stoats](#), dogs and cats.
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- Another threat to the huia was the number of hunters and collectors. Huia were killed so that they could be stuffed and put on display in private homes as well as museums.
- Traditionally only Māori chiefs were allowed to wear huia feathers, and to wear the beak or tail feather of the huia was thought to be a great honour.

Laughing Owl

- The laughing owl was about 40 cm high, twice the size of New Zealand's other native owl, the morepork. It had long legs covered with feathers, and large claws.
- The name "laughing owl" came from its call, a series of "dismal shrieks".
- Fossil evidence has shown that once it was found throughout New Zealand, on all three islands.
- Remains of owls have been found in forested areas in Nelson, and in more open country on the east coast of the South Island. Owls nested and roosted in cave entrances, hollow trees, and dry crevices in cliff-faces.
- The laughing owl was nocturnal, and fed on any small animal found on the forest floor at night, dawn, or dusk. Its diet included lizards, rodent, earthworms and small birds.
- Where other native birds suffered from predation by [kiore \(Polynesian rat\)](#), the laughing owl turned the tables and adapted its diet to include the rodent. It was also capable of catching and killing larger birds, such as the weka, and even the other New Zealand owl, the morepork.
- After surviving for an estimated 1 million years in New Zealand, the numbers of laughing owl dropped quickly after [ferrets and stoats](#) were introduced to deal with the rabbit plague of the late 19th century.

Moa

- Some moa bones have been dated and found to be 2 million years old and are believed to have died out between 300 and 400 years ago.
- One of the moa species, *Dinornis giganteus*, was, at 3 metres, the tallest bird ever to have lived, but only measured its full height when it stretched up to feed off high branches - its normal posture gave its height at 1.8 metres. It would have weighed about the same as a cow.
- It is now thought that there were 11 species of moa, ranging in size from the tallest (1.8 metres to the highest point on its back, and 240 kg) to the smallest (0.8 m to the highest point on its back, and 20 kg).
- Moa belonged to the family of Ratites, or flightless birds (includes ostriches, emus, and kiwis) which have no wings, not even small stubs of wings like the kiwi.
- Moa are unique in that they have no traces of wings or other bones which are necessary for flight. Instead moa had large, powerful legs, with four toes on each foot.
- Large amounts of moa remains have been found on the east coast of the South Island, but moa would have lived when these areas were still covered with forest. Preserved stomach contents have shown that the moa ate a diet of twigs, seeds, leaves, fruit and leaves, and browsed on shrubs, rather than grazed on grass.
- The moa was hunted by the Māori using snares, spears, and nooses, or by driving them into pits. Dogs and [kiore \(Polynesian rat\)](#) would also have hunted the moa.