



**Title:** A Reminder of a Vanished Ecosystem: the Haast's Eagle at Macraes

**Description:** Sculpture of Haast's Eagle by Mark Hill at Macraes, Central Otago

**Photographer:** Ann Wheatley [@ann.wheatley.photography](https://www.instagram.com/ann.wheatley.photography)

**Where and when:** Macraes, 27 May, 2023

**The Story:** In 2008 a helicopter transported Mark Hill's steel sculpture of Haast's Eagle, the largest eagle that has ever lived, to the Art and Heritage Park in Macraes, Central Otago. The sculpture is 7 m wide with a wingspan of 12 m and was commissioned by Oceana Gold as a part of a commitment to leave a legacy "other than mining" for the Macraes area.

Haast's eagle (hōkioi or pouākai) lived in the South Island before its extinction more than 500 years ago. Its massive size is thought to be an evolutionary response to the size of its prey, the giant, flightless moa. Haast's Eagle weighed up to 15 kg and had a wingspan of up to 3 m, a relatively short wingspan for its size. Short wings may have aided Haast's eagles when hunting in scrublands and forests, representing a departure from the soaring flight of its ancestors.

We know that Central Otago was home to moa and eagles, but what was the vegetation like before humans arrived?

In 2022 palaeobotanist Mike Pole published a peer-reviewed study in *Palaeontologia Electronica*, presenting evidence that stands of golden-flowered kōwhai cloaked the lower slopes and gorges of Central Otago. This “vanished ecosystem” was revealed after decades of arduous, self-funded work.

According to Mike, the arid hills of modern Central Otago result from fire, introduced animals such as sheep and rabbits, and new plants. Māori introduced a few plants to Aotearoa, a number swamped by the tidal wave that arrived with European colonisation – some 25,000 new species. Today’s landscape is so different that “it is difficult to understand what the ‘original’ vegetation was,” he says.

Mike visited rock overhangs and small caves throughout Otago before selecting 115 suitable study sites in the Kawarau, Cromwell, and upper Roxburgh gorges. He was looking for undisturbed accumulations of ancient, dried vegetation. Some of it seemed to be moa roosting material, with moa poo still scattered through it. The vegetation in his study dated between 1000 to 4000 years old.

Based on the “nearly ubiquitous” presence of their leaves in the shelters, Mike concluded that the most important plant in the area was *Sophora microphylla*, a species of kōwhai. Other trees common then, but absent now, include *Pittosporum tenuifolium* (kōhūhū or black matipo) and *Pseudopanax ferox* (toothed lancewood or horoeka), although these were subordinate to the kōwhai.

Further evidence of the existence of kōwhai, horoeka and black matipo in the area was documented in a pioneering study by University of Otago researcher Jamie Wood and Susan Walker from Landcare Research.

Mike also found signs of *Carmichaelia* (native broom), *Rubus* and *Hebe*, shrubs suggestive of open vegetation among the forests of kōwhai.

Some species of moa, he explains, were forest or forest-margin dwellers, and “tree-browse” was a big part of their diet. Another clue, Mike explains, comes from a study led by palaeozoologist Trevor Worthy. Trevor showed that some of the birds who lived here thousands of years ago typically lived in forest or dense shrubland.

Sources:

<https://www.odt.co.nz/regions/north-otago/haast-eagle-has-landed>

[https://en.wikipedia.org/wiki/Haast%27s\\_eagle](https://en.wikipedia.org/wiki/Haast%27s_eagle)

<https://www.stuff.co.nz/environment/127491489/did-moa-once-browse-in-huge-kwhai-forests-in-central-otago>

**Camera:** Olympus OM-D E-M1 M3

**Lens:** Olympus MZuiko 12-40 mm f/2.8 Pro

**Exposure:** 35 mm f/11 1/160s ISO 64

**Digital specs:** 4897 x 3672 pixels

**Key words:** New Zealand, Aotearoa, Haast's Eagle, Moa, Kōwhai, Central Otago, Macraes, contemplative, visual storytelling, Ann Wheatley, Ecosystems Photography

**Price:** \$250 (incl. GST) for use of the digital image. Visit [www.ecosystemsphotography/sales](http://www.ecosystemsphotography/sales) for details & to order, or to get a quote if you would like a high-quality print.

**Donation:** The price includes a \$100 donation to the [Nelson Tasman Climate Forum](#) or to a sustainability organisation or project of your choice.

**Image ref:** AW#007 (please use this reference in all orders and correspondence).  
Ann Wheatley 5 Jul 2023