The Arve Giant

Footprint of a Giant
At your feet is a footprint trace of one of the world’s largest living things, a giant Swamp Gum tree only a short drive from Geeveston. It shows features of the tree’s base: strong buttresses, a low overhanging bulging mass and exposed roots reaching downhill. This base tapers upwards into a massive columnar stem reaching towards the sky. Each side of the footprint tells part of a five hundred year story.

South Side

<table>
<thead>
<tr>
<th>Species</th>
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<tr>
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A Titan of the Forest
The Arve Giant is a contender for the largest known living Eucalyptus tree, as measured by wood volume. This individual Eucalyptus regnans may be the largest-stemmed flowering plant on Earth, and is one of the many giant trees found today in Tasmania.

Moss
In the moisture of the stringy bark, moss finds a home and in turn serves as habitat for insects, arachnids, and many other small animals. By contrast, the branches are much drier.

Stability
Like other giant gums, this tree is hollow inside the lower stem. The buttresses help to support the immense mass of wood being constantly pulled downward by gravity.

The South Side - The Forest

Nearby stems: The south side is crowded with smaller rainforest trees than the Arve Giant, including myrtle beech (Nothofagus cunninghamii) and tree ferns (Dicksonia antarctica). It’s impossible to get a clear view up into the branches, or to see any distance through the forest.

Strong buttresses: Huge buttresses flare out from the base, lending stability to the massive tree. Between these wooden “blades” are deep moist crevices where moss and leaf litter collect.

Exposed heartwood: Triangular zones of exposed interior wood can be seen in the photo above. The cover of live bark trying - and failing - to grow over this wound reveals how the outer bark of such a giant tree is only a few centimetres thick. Amazingly, this thin layer is where much of the tree’s growth takes place.

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Panel + Photos by Tasmanian Geographic / YD Bar-Ness.
More info + references: hello@giant-trees.com

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**The East Side - Downhill**

**Roots downhill:** As the forest soil slowly creeps downhill, the roots on this side of the tree are partially exposed quite distant from the main stem. The footprint at the Geeveston Town Hall incorporates these in the massive bulges stretching towards the two doorways and the main road. If the ground was level, the footprint would be substantially smaller.

**Tree fern:** In the soil collected between two buttresses, a sizeable tree fern has found a foothold and is happily growing. Its old fern fronds add to the soil as they age and decay.

**Down to the stream:** Rainfall here flows 200 metres downhill to Foaming Creek, then into the Arve River, then the Huon River, meeting saltwater near Huonville. It continues past Geeveston on its journey to join the waters of the Pacific Ocean.

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**East Side**

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**Two bark types**
The lower stem has flakey stringy bark which protects from fire. The upper stem has smooth bark which peels into ribbons and lets light onto the photosynthetic bark.

**Flame ribbons**
The hanging ribbons of bark are extremely flammable and help fuel the infrequent but intense bushfires that the Eucalyptus forest needs to regenerate its millions of tiny seeds.
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**Sunshine Directions**

In the Southern Hemisphere, the midday sun is in the north of the sky, and the gap in the forest for the viewing platform is also to the north. Leaves on this side get more light than the other side.

**Wooden Spire**

The top third of this tree is dead. Older *Eucalyptus* decline from the top down. Standing above the other trees, the Arve Giant no longer needs to bring water up into its highest branches.

### The North Side - The Face

**An open view:** The viewpoint for the tree is from the north, and while approaching from the roadside you are treated to a rare open view of a giant tree. In the clear area opened by the construction of the viewpoint, there is now space for branches to reach for the light. Direct sunlight now reaches the lower surface of the tree.

**Strange textures at the base:** To the left, the ground drops steeply away and some dead wood is exposed above the roots. Thick plates of bark are flaked over the dead wood, with a broad gap exposed below. A few thickened “fingers” of wood spiral leftwards several metres up the stem. In the centre, vertical ridges are lined up close together. To the right, a massive, crumbling burl bulges outwards over a solid buttress of dead wood. Ribbons of smooth bark have fallen from above, but the stem bark is stringy and flakey.
The West Side - Uphill

Enormous burl: The west side is dominated by a massive burl bulging out just above the ground. Plants produce wooden burls in response to damage. The burl grows over and contains the wound. This one is so old that it has decayed completely through. Burls are common in old Swamp Gums, and come in an endless variety of shapes.

The road: The road just above this side brought many changes to this patch of forest. Light, wind gusts, gravel dust, and temperature shifts have changed growing conditions for the tree. The roads and tramways built for forest harvest travel through the landscape mosaic past forests of different ages. They also provide access from Geeveston to the Arve Giant and other areas of ancient trees.

Low dead branches
Some branches don't get enough sunlight, and they eventually die off. Those low in the crown are shaded by the branches higher up in the same tree.

Resprout branches
The living branches visible are young “epicormic” resprouts. Original branches on an old tree would be much bigger. Most of the original branches have rotted and fallen.

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Forest Ancient

Five centuries and still growing

The Arve Giant is approximately five centuries old, but because of their inevitably rotten cores, it is impossible to count annual tree rings of old eucalypts. Many Tasmanian giant trees are 400-500 years old, and the Arve Giant’s size and basal complexity perhaps suggest its a fair bit older. These are some of the fastest-growing trees on Earth. In good conditions, a Eucalyptus regnans can reach maximum heights approaching one hundred metres after 200 years. It’s likely that there have been individuals even taller growing sometime in the past.

Challenging World
Over the last five hundred years, the forests nearby have experienced fires, droughts, lightning, windstorms, freezes, floods, insect attacks, hail, and intense sunlight.

Human Contact
Humans have changed the Huon forests for more than 400 centuries, most notably by setting fires and hunting mammals. Forest clearing began about 150 years ago.

Tourism
In 1880, the now-lost “Lefroy’s Tree” was preserved and signposted by the colonial Governor’s wife Charlotte Lefroy.

The Future
You may outlive the Arve Giant, but forests nearby include many young trees that, if given the chance, may grow into future giants. They can serve as natural wonders to future generations.

Tasmania has some of Earth’s oldest plants.

There are even older plants in Tasmania: Individuals of Huon Pine (Lagarostrobos franklinii) can live for three thousand years — and a clonal individual has been aged at an estimated ten thousand years. About seventy kilometres from here in the wild Southwest lives what may be the one of the world’s oldest plants - a clonal King’s Lomatia (Lomatia tasmanica) 43,000 years in age!

Signs of ancient Eucalyptus

- Its upper stem is dying back
- Thick original branches replaced by smaller resprouted branches
- The thick buttresses at the base

1517 1567 1617 1667 1717 1767 1817 1867 1917 1967 2001 2017 2022

Tahune Airwalk opened
Bushfires across Tasmania

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<tr>
<th>Year</th>
<th>Event</th>
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<tr>
<td>1517</td>
<td>The Arve Giant Tree sprouts</td>
</tr>
<tr>
<td>1567</td>
<td>The Arve Giant's neighbour gum trees die off</td>
</tr>
<tr>
<td>1617</td>
<td>Rainforest understory dominates below Arve Giant</td>
</tr>
<tr>
<td>1667</td>
<td>Tasman sights Van Dieman’s Land</td>
</tr>
<tr>
<td>1717</td>
<td>The Arve Giant at max height around 90m</td>
</tr>
<tr>
<td>1767</td>
<td>Arve Giant loses major original branches</td>
</tr>
<tr>
<td>1817</td>
<td>Arve Giant loses original branches</td>
</tr>
<tr>
<td>1867</td>
<td>Top of Arve Giant begins dying</td>
</tr>
<tr>
<td>1917</td>
<td>Geeves family begins farming locally</td>
</tr>
<tr>
<td>1967</td>
<td>Geeveston - largest timber mill in Southern Hemisphere</td>
</tr>
<tr>
<td>2001</td>
<td>SW Tasmania World Heritage listing</td>
</tr>
<tr>
<td>2017</td>
<td>More info + references: <a href="mailto:hello@giant-trees.com">hello@giant-trees.com</a> + <a href="http://www.giant-trees.com">www.giant-trees.com</a></td>
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Earth’s Giants

Tasmania has the world’s tallest and largest flowering trees

With the tallest known individual *Eucalyptus regnans* measured at 99.8 m tall (pictured below), Tasmanian *Eucalyptus* trees are the tallest flowering plants on Earth. At some point in the past, it's very possible that the world's tallest tree was here in Tasmania.

They're also:

- the largest-stemmed flowering plants on Earth
- the second tallest tree species, and
- the tallest trees in the Southern Hemisphere.

The world's tallest tropical forests and the tallest flowering plants (*Shorea & Koompassia*) outside of Tasmania are in Malaysian Borneo.

The giant banyan figs (*Ficus benghalensis*) of India can stretch 200m across in a network of roots and branches, making them the broadest trees on Earth.

At 115.7m tall, the non-flowering California coastal redwood (*Sequoia sempervirens*) is the tallest tree species on Earth.

Californian Giant Sequoia (*Sequoiadendron giganteum*) are the largest-stemmed trees on Earth.

The kauri trees of NZ (*Agathis australis*) contend with our trees as the largest-stemmed trees of the Southern Hemisphere.

Western Australia’s red tingle trees (*Eucalyptus jacksonii*) are the stoutest girthed eucalypts after *E. regnans*.

Japan’s giant camphor (*Cinnamomum camphora*) at Kamou has the stoutest girth of any Asian tree.

At 99.7m, NW American Douglas-fir (*Pseudotsuga menziesii*) is the third tallest tree species on Earth.

At 96.7m, NW American Sitka spruce (*Picea sitchensis*) is the fourth tallest tree species.
Meet the Giant

Short drive away, easily accessible

- Follow the Arve Road towards the Airwalk into the forests west of Geeveston, and turn left just past the Keogh's Creek Walk (14.5 km from Geeveston). Travel 0.7 km uphill and the Giant is on the left.

Stay Safe

- This is a working forest: be alert for heavy vehicles
- Please stay on formed tracks and roads
- Watch out for wildlife, especially at dawn and dusk
- Mobile phone signals may be unavailable
- Avoid entering the forest on days of high bushfire danger and extreme wind gusts

The Airwalk

The Airwalk offers a unique perspective of the giant forest treetops, bringing you high into the *Eucalyptus obliqua* forest canopy. You can see ancient Huon pines by their namesake river, and begin long bushwalks into the Southwest Wilderness. Behind the Airwalk is the Warra Research Site, a focal point for scientific activity.

Hartz Mountains

The National Park offers the most accessible sample of Southwestern alpine and high rainforest vegetation. There are short walks to mountain lakes, and an excellent, challenging climb to the rocky dolerite summit of Hartz Peak.

More Giants, even Closer

Halfway to the Airwalk, stop at the Look In Look Out (pictured right) to see another giant *Eucalyptus regnans* amongst some historical logging machinery. A short walk leads to The Grandmother, an immense, moss-covered myrtle beech (*Nothofagus cunninghamii*).

You can also simply enjoy viewing these trees through your car windows as you drive towards the Airwalk. And remember: even the smallest herb is a giant to the tiny animals crawling on it!
Island Ambassadors

There are many notable trees around Tasmania to visit after your Geeveston Giant Tree adventure. The biggest individuals are in the *Eucalyptus* species: *regnans*, *obliqua*, *globulus*, *viminalis*, and *delegatensis*. Here’s a few giant *Eucalyptus* trees you can find in the north and south of Tasmania.

Branching Out

Of course, there are many other amazing tree species of all sizes you can discover on your travels, including:
- Blackwood (*Acacia melanoxylon*)
- Celery Top Pine (*Phyllocladus asplenifolius*)
- Huon pine (*Lagarostrobos franklinii*)
- Pencil Pine (*Athrotaxis cupressoides*)...and many more!

Here in Geeveston in 1880, Lefroy’s Tree was one of the first trees set aside for European tourists. Photographed in the 1890s, its location and fate is unknown.

In the hills just above Geeveston, the Kermadie Queen *Eucalyptus regnans* is a contender with the Arve Giant for the largest flowering plant on Earth.
**Tasmanian Giants**

The world’s tallest flowering trees are here in Tasmania. Tasmanian *Eucalyptus regnans* is the second tallest tree species on Earth. It includes the tallest trees in the Southern Hemisphere and some of the largest-stemmed of all flowering plants.

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**Tallest Tree Species**

- California, USA
- Sequoia sempervirens
  - Height: 115.7 m
- California, USA
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  - Height: 94.9 m

**Largest-stemmed Trees**

- Tasmania, Australia
  - *Eucalyptus regnans*
  - Height: 99.8 m
- Tasmania, Australia
  - *Eucalyptus viminalis*
  - Height: 89.0 m

**Tallest Flowering Plants**

- Eastern Tasmanian Giants
- Tropical Giants of East Asia
- Africa’s Tallest Trees

**Tallest Flowers**

- California, USA
  - *Sequoia sempervirens*
  - Height: 115.7 m
- California, USA
  - *Sequoiadendron giganteum*
  - Height: 94.9 m
- Tasmania, Australia
  - *Eucalyptus regnans*
  - Height: 99.8 m
- Tasmania, Australia
  - *Eucalyptus viminalis*
  - Height: 89.0 m
- Mindanao, Philippines
  - *Petersianthus quadralatus*
  - Height: 87.8 m
- Kilimanjaro, Tanzania
  - *Entandrophragma excelsum*
  - Height: 81.5 m

**Human**

- Height: 1.6 m

**Taj Mahal**

- 73 m
- Agra, India

**Wrest Point Casino**

- 73 m
- Hobart, Australia

**Sydney Opera House**

- 65 m
- Sydney, Australia

**Statue Of Liberty**

- 44 m
- New York, USA