

Swamp Tea-tree forest

A NATIONALLY ENDANGERED ECOLOGICAL
COMMUNITY IN SOUTH EAST QUEENSLAND



Healthy Land & Water has been working with landholders, community groups and governments to protect and restore nationally threatened ecological communities found in South East Queensland.

Swamp Tea-tree forest is nationally threatened and protected under the *Environment Protection and Biodiversity Conservation Act 1999*, Australia's national environment law.

Plants



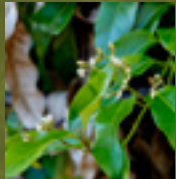
Swamp Tea-tree
Melaleuca irbyana

The endangered Swamp Tea-tree often grows in thickets. It has papery bark, tiny leaves and fluffy white flowers.



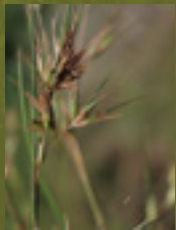
Queensland Blue Gum
Eucalyptus tereticornis

This favoured Koala food tree can grow up to 45m. Its smooth bark peels in irregular patches. Mature tree hollows provide vital habitat.



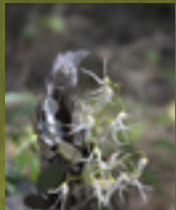
Slender Milkvine
Marsdenia coronata

This leafy vine with tuber-like roots is listed as vulnerable. It has milky sap and clusters of bell-shaped, yellowish flowers.



Kangaroo Grass
Themeda triandra

A tall tufted perennial with green to grey leaves that dry to an orange-brown in summer, and large rusty-red spikelets on branched stems. It provides valuable pasture for stock and wildlife.



Tongue Orchid
Cryptostylis hunteriana

Grows from a creeping, thick-leaved rhizome on living and dead branches of Swamp Tea-tree. It produces sprays of small creamy white flowers in September and October.



Winter Apple
Eremophila debilis

This prostrate woody shrub with fleshy stems produces small mauve, white and blue flowers and small fleshy fruits from February–March.



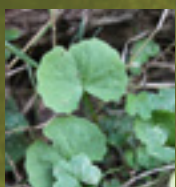
Blue Trumpet Flower
Brunoniella australis

A perennial herb with tuberous roots which allow it to resprout after fire. It has small purple flowers and a long capsule-shaped fruit.



Flax Lily
Dianella caerulea

A perennial herb that grows to a metre high, with erect dark green blade-like leaves. Produces blue star-shaped flowers and purple berries.



Pennywort
Centella asiatica

A creeping, perennial herb with round to heart-shaped leaves, slender stems that root at the nodes and a rhizomous root. Leaves form at the end of long stalks.

Animals

Red-backed Fairy-wren
Malurus melanocephalus

A small bird with a long, upright tail. Breeding males are black with a vibrant scarlet cape. Females and juveniles are brown. Feeds on insects, seeds and small fruit.



Grey Fantail

Rhipidura albiscapa

Easily recognised by its fanned tail and aerial acrobatics as it chases insects, this grey bird has white eyebrows, throat and tail edges. It is known to migrate in autumn and winter.



Koala

Phascolarctos cinereus

This Aussie icon is threatened in SEQ due to loss of habitat. Koalas feed primarily on eucalypt trees, though other trees may be used for shelter. Some favoured food trees are found in Swamp Tea-tree forest.



Eastern Grey Kangaroo

Macropus giganteus

This large, grey native marsupial can grow up to 2m tall. Swamp Tea-tree forest provides feed and shelter in the heat of the day.



Beeping Froglet

Crinia parinsignifera

A small ground dwelling frog. The males' drawn out and high-pitched "eek" call can be heard all-year round from the edge of a water pool or nearby vegetation.

Red Belly Black Snake

Pseudechis porphyriacus

This venomous frog-eating snake has declined due to Cane Toads. It has a red, crimson or pink belly, black top of the head and body, and pale brown snout. It can reach up to 2m in length.



Short-beaked Echidna

Tachyglossus aculeatus

This shy, slow-moving little ant-eater is a ground-dwelling monotreme with distinctive spines. Echidnas love the termites that are abundant in Swamp Tea-tree forest.

This forest is an example of an 'ecological community'. An ecological community is a group of plants and animals that interact with each other in a given location.

Swamp Tea-tree forest is a unique ecosystem with shaggy and twisted trees, tall eucalypts and a grassy understorey. It may not be a towering rainforest, but we think it's pretty special.



Know your forest

Swamp Tea-tree forest is home to a great diversity of wildlife and plant species. The forest is seen in various forms (called regional ecosystems), ranging from scattered to dense thickets under sparse or well-wooded eucalypt overstoreys. The understorey always comprises an amazing range of native grasses, flowers and herbs, creating important habitat for a variety of reptiles and other ground-dwellers. No matter what form the forest takes, it is always dominated by the presence of Swamp Tea-trees.

This forest typically grows on the swamp-like areas of poorly drained clay soils in low-lying areas. Heavy rains create numerous seasonal ponds which provide important habitat for frogs and other wetland life.

Why it's so special

Extensive clearing of Swamp Tea-tree forest over the last two hundred years has left only small remnant patches. It is found nowhere else in Australia, except in South East Queensland (SEQ), so it is vital that we work together as a community to protect what is left. Managing remaining forest not only provides habitat for a variety of animals and plants, such as Koalas, echidnas, wallabies, various bird species and the vulnerable Slender Milkvine, but their swamp-like nature also makes them ideal for retaining volumes of water, important in minimising the impact of floods and providing refuge in dry times.

What you can do

Much of the remaining Swamp Tea-tree forest is found on private land. Identifying whether you have it on your own property can be challenging for those not used to identifying native plants. Since 2009, **Healthy Land and Water** has been helping landholders identify whether they have Swamp Tea-tree forest on their property, assessing its condition and supporting landholders with a range of management strategies to improve the state of remaining areas in a way that also meets landholder production or lifestyle goals. Whether you are a first-time hobby farmer or a third generation grazer, we welcome you to contact **Healthy Land and Water** and speak to one of our on-ground staff.

Landholders can also sign up to the voluntary Land for Wildlife program, that provides a number of support services through information and grants.

Why it's under threat

SEQ has one of the fastest growing human populations in Australia. In areas where Swamp Tea-tree forest is found, competing land uses (such as urban expansion and agricultural practices) have cleared many original forested areas, to the point where 90% of these have disappeared. Swamp Tea-tree forest is now nationally listed as critically endangered.

Fragmentation makes remaining patches vulnerable to weeds, pest animals, stock and fire. This is because the edge-to-area ratio of a small patch of vegetation is comparatively larger than an undisturbed stretch of forest, making the edges more exposed to the drying effects of wind and sun, invasion of weeds, and disturbance from surrounding land uses.

Reconnecting patches of forest through good management allows species to move more easily between forested areas via protected corridors whilst also encouraging a healthy, more resilient ecosystem.

In its current, fragmented state, the forest is susceptible to the following threats.

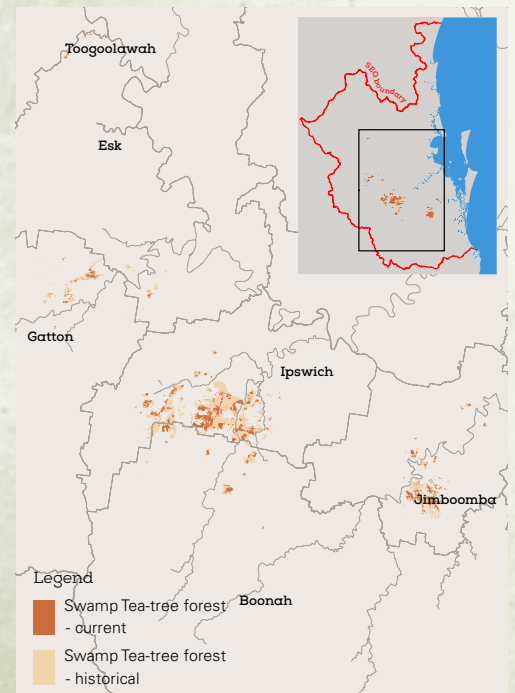
Weeds

Weeds are plants growing where they are not wanted. They compete with native plant species for space, water and nutrients, which can affect the delicate balance of a particular ecosystem and its species.

More than 40 species of weeds have been recorded in disturbed areas of Swamp Tea-tree forest. They can rapidly colonise the more vulnerable forest edges and the understorey. Weeds of particular concern include Mother-of-Millions, Lantana (listed as a Weed of National Significance), Creeping Lantana and exotic grasses such as Guinea Grass.

Found in an arc west of Brisbane, Swamp Tea-tree forest grows on poorly draining clay soils on plains and low hills from Jimboomba to Toogoolawah.

Its swamp-like nature makes it ideal for retaining volumes of water, minimising the impact of floods and providing refuge for many creatures in dry times.



Current and historical extent of Swamp Tea-tree forest in South East Queensland

Mapped areas are potential locations of Swamp Tea-tree forest communities based on the best available regional information. The areas are overestimates of this forest's extent, and may include other related ecosystems. Further verification is required.

Threats



Tackling weeds

The way in which weed control is approached depends on the species involved. Methods can be physical (e.g. hand-pulling), mechanical, chemical or, in some cases, biological. The key is prevention, early detection and eradication. Long-term management to keep weeds from re-emerging is crucial. If weeds are managed effectively, local native species can begin to regenerate and eventually outcompete weed species. Local native species can also be planted in areas cleared of weeds to replace any habitat that the weeds may have provided.

Livestock

Overgrazing by livestock in Swamp Tea-tree forest areas is a common problem with many of the naturally occurring, palatable grassy species grazed faster than they can be replenished. The compromised health of the native pastures allows weeds to become established. In addition, understorey areas subject to high rates of stock movement can be damaged from trampling and erosion.

Hard hooves banging on exposed tree roots also trigger suckering (suckers are shoots that grow upwards from the roots) promoting the regeneration of Swamp Tea-trees. This can lead to dense stands of thin-stemmed trees with little understorey, rather than fewer mature trees with denser understorey.

Managing livestock

Good fencing is an important way to manage where on your property livestock are allowed to graze, and facilitates rotation between paddocks, preventing areas from becoming overgrazed, promoting natural regeneration and limiting excessive Swamp Tea-tree suckering.

Pest animal issues

Introduced animal species that may be found in Swamp Tea-tree forest include the Fox, Brown Hare and Cane Toad. Although the impact of these pest species has not been quantified specifically for Swamp Tea-tree forest, it is well known that many pest animals outcompete native animal species through predation, competition for food sources and introduced diseases, affecting the balance of the forest's delicate ecosystem.

Controlling pest animals

Pest animal issues require an integrated management approach. Contact the Invasive Animals Cooperative Resource Centre (CRC) or your local Council for the latest information and support available.

Clearing, disturbance and modification

Sadly, extensive clearing caused by urban expansion, and competing land uses such as agricultural practices, have resulted in over 90% of this forest type being lost. But it is not all bad news – work to restore, connect and expand remaining patches has brought about positive change on many properties in SEQ, and will be continuing into the future.

Restoring remaining patches

Where Swamp Tea-tree forest patches are isolated from each other or from other native vegetation, 'buffer zones' can be developed to assist natural regeneration and improve connectivity between patches.

Assisting natural regeneration by improving fire and stock management, particularly around the edges of existing forest, will aid in the re-establishment of this vital ecosystem. Planting pioneer local native species in these areas, or where Swamp Tea-tree forest used to occur, can also facilitate positive regeneration.

Find out more

Healthy Land & Water

If you are interested in finding out more about how to identify or manage Swamp Tea-tree forest on your property, our team can provide support and advice, as well as information on regional funding.

Ph: 07 3177 9100 E: info@hlw.org.au
www.hlw.org.au

Land for Wildlife

If you are interested in signing up your property to this free, voluntary conservation program, then get in touch with your local coordinator or visit www.lfwseq.org.au

Your local catchment or Landcare group

www.landcareaustralia.com.au

Australian Government

www.environment.gov.au

- Swamp Tea-tree forest of South East Queensland, Advice to the Minister, 2005
- Nationally Threatened Species and Ecological Communities - Swamp Tea-tree forest of South East Queensland, 2005
- Swamp Tea-tree forest of South East Queensland SPRAT (Species Profiles and Threats) profile

Helpful resources

South East Queensland Ecological Restoration Framework, 2012

www.hlw.org.au

Weeds of Southern Queensland, 3rd edition, Weed Society of Queensland

Credits

Creative consulting including design, editing and illustration by Ecocreative®.

Photos provided courtesy of Glen Leiper (Swamp Tea-tree), Tony Milkvine, Bruce Lord, Healthy Land and Water (Queensland Blue Gum), Christine Peterson (Kangaroo Grass), Liz Gould, Healthy Land and Water (Tongue Orchid, Blue Trumpet Flower and Pennywort) Ruth Palsson (Winter Apple) and James Gaither (Dianella Caerulea) <http://flic.kr/p/6Jk6SS>.

Since 2009, the Australian Government Caring for our Country program and Greenworks have been investing in the protection of ecological communities such as Swamp Tea-tree forest. As a result of this funding, **Healthy Land & Water** was able to work with landholders across South East Queensland to restore and reconnect more than 157 hectares of this forest from 2009-2012. This was a successful program and much more could be done with more funding to continue this work.



CARING
FOR
OUR
COUNTRY