



Frequently Asked Questions Tasmanian devils

1. What do Tasmanian devils look like?

The world's largest surviving carnivorous marsupial, the Tasmanian devil has a thick-set, squat build, with a relatively large, broad head and fluffy thick tail. The fur is mostly or wholly black, but white markings often occur on the rump flanks and chest. Adult males are larger than adult females. Large males weigh up to 12 kg, and stand about 30 cm high at the shoulder. A typical adult female would weigh 7 or 8 kg. Devils reach adult body size by two years of age.

2. How did they get their name?

Imagine how European settlers first encountered the Tasmanian devil. Unearthly screams, coughs and growls come from the bush near a settler's hut. The settler comes to investigate and sees dog-like black and white animals with red ears, wide jaws and big sharp teeth. The settler thinks they've glimpsed the hounds of hell or did they hear a brush tailed possum screeching and blame the devil? Both have an impressive screech!!

Aboriginal people also had several names for them, one of which was "purinina".

3. Why are they black and white?

Many predators have black and white patterns like devils (another example is the sun bear).

This black and white flash pattern seems to be an adaptation to break up the profile of the animal. In some respects it is a form of camouflage, making it difficult for prey to distinguish the shape of the animal. The paradoxical question however is why then are 10 per cent of devils black with no white markings?

Devils "display" to each other a lot with their head held high and with a wide gaping "yawn". When they do this the white blaze on the chest is obvious, could this enhance the display objective? Similarly when devils interact aggressively, the loser turns and runs making the rump display prominent. Could this in turn assist with enhancing the message or is it "faking" which end is which?

4. How long do they live?

Very few wild devils live longer than 6 years. In captivity, they may live to 7-8 years of age.

In early 2018 the Save the Tasmanian Devil Team were excited to trap Boots, a devil they released at Narawntapu in 2015. Before his release Boots had lived in captivity for 4.5 years and now a further 2.5 years in the wild which makes him the longest recorded surviving translocated devil in the wild, a true survivor.

5. Where do they live?

Despite the decline in numbers since the detection of DFTD in the 1990s, populations of Tasmanian devils remain widespread in Tasmania from the coast to the mountains. They live in coastal heath, open dry sclerophyll forest, and mixed sclerophyll-rainforest. Devils will live almost anywhere they can hide and find shelter by day and find food at night. They also take advantage of the interface between native habitat and agricultural paddocks, where their favourite prey species are often found

6. Where and when do they breed?

Tasmanian devils breed in dry caves, hollow logs and burrows, particularly wombat burrows. They prefer dry and warm sites and avoid exposed areas because their young are small and vulnerable to predators.

Most Tasmanian devils mate between February and May and after a gestation period of around 21 days the young are born. Around 40 young are born, but a maximum of four can be accommodated in the mother's pouch, which has only 4 teats. Young stay in the pouch for about four and a half months. After this time the young start venturing out of the pouch and are then left in a simple den, often a hollow log. Young are weaned at five to six months of age, and have usually left their mother to live along by late December. These young then typically start breeding at the end of their second year.

They breed on average for three years and generally start at the end of their second year. More young survive in the first year of breeding, less in the second and third years. Very few Tasmanian devils breed for four years.

Research has shown that the presence of DFTD in a devil population over several years results in a change of breeding behaviour. Females begin to breed earlier, at 1 year old, but as they need to be physiologically ready to mate, often they won't come into oestrus until well after the usual mating period. This extends the breeding season now from February to July. The result for the population is that there may be females with pouch young for most of the year, and juveniles dispersing from December through to June.

7. How strong are their jaws?

In absolute terms, there is no good measurement because you never know how hard they are biting. That applies to most animals but we do know the relative strength. Devils have jaws of biting power as strong as a dog about four times their weight. So a 10 kg devil has as powerful a bite as a 40 kg dog, in this respect they are very similar to hyenas, particularly the spotted hyena.

A Tasmanian devil bite is backed up by the teeth. They have strong carnassial teeth made for crushing bone, premolars and incisors for tearing flesh and canines for killing. Relative to body size they have a bite stronger than a Bengal tiger

8. What is their hearing and sight like?

Their hearing is excellent. It seems to be the dominant sense along with smelling.

Like most nocturnal animals their sight seems to be oriented heavily on black and white vision. Black and white vision is mainly designed to detect movement, so if something moves they have good eyesight, whereas if something stays still they are unlikely to see it clearly.

9. What is their sense of smell like?

Tasmanian devils seem to have an excellent sense of smell, although it is probably not as good as a scent hound. They can smell a carcasses at least 30m's and appear to follow scent trails with ease. A trail of fish oil across a paddock became a path as the devils sniffed their way along it

10. Why are their heads so big?

The heads are very large in adults, particularly old males. Adult males compete with each other for females and, once victorious, they need to be able to subdue the females in order to mate with them. They hold the female in a den for days during mating. This den is often a cave, hollow log or wombat burrow. The large fearsome head, mouth and teeth are an effective barrier to other males that might want to join the fray.

As their diet is mainly carrion, bone-crunching and breaking through thick skin is something devils need to be able to do. The skull has a strong sagittal crest and the strong jaw muscles attach to this, in turn the neck needs to be big and strong to carry this crunching machine. In very old males, the head and neck can contribute nearly a quarter of the weight of the animal. The Spotted hyena has a similar body profile for the same reason, and interestingly a similar rocking horse gait when travelling, probably an adaption to carrying this shape economically across the landscape as they forage

11. Why are their whiskers so long?

Not only are their whiskers long but there are lots of them. They are positioned in clumps on top of the eyes, muzzle and in the normal 'whiskery' places. These long whiskers help when they are foraging in the dark. They also help devils space themselves from each other when they are feeding on carrion together – if devils' whiskers are not touching each other when they are feeding they are safely outside biting range. When devils are agitated or alert they raise the whiskers. They are both sensory and behavioural devices, handy tools really.

12. Can Tasmanian devils climb?

All devils can climb. Young Tasmanian devils climb very well, larger devils not as well, but they are very persistent. They have good gripping ability with their front paws even though they do not have retractable claws like cats. They use their large footpads on the hind legs as contact grips and friction pads. They climb in three different ways: "spiderman" - climbing using legs, tail and chin in thick scrub; "chiming" - like a person climbing a pole; or like a possum with just the claws doing the gripping.

13. Can Tasmanian devils swim?

Tasmanian devils are also very good swimmers, however if they have young in the pouch they avoid swimming for more than very short distances. Tasmanian devils actually love water and will wade and splash about, even sitting or lying down in it to stay cool. They will often dabble in water with their front paws, somewhat in the manner of racoons. Tasmanian devils will sometimes store food in water and can even take a breath and "duck dive".

14. How fast can Tasmanian devils run?

On rough terrain Tasmanian devils can run faster than a person; on very smooth terrain they cannot run as fast as a good human runner. Tasmanian devils have been 'clocked' running on a flat road at nearly 25 km/h for up to 1 km. They can run at 10 km/h for many kilometres

15. Why do they make so much noise?

The Tasmanian devil makes a variety of fierce noises, from harsh coughs and snarls to high pitched screeches. A sharp sneeze is used as a challenge to other devils, and frequently comes before a fight. Many of these spectacular behaviours are a bluff and part of a ritual to intimate other animals in order to avert a fight when feeding communally at a large carcass.

Powerful animals like the Tasmanian devil often have sophisticated mechanisms to avoid fighting so they do not damage themselves. The sound helps to resolve the pecking order. Devils have a variety of calls. They start an encounter with another devil with a 'humf growl', sniffs and snorts, and if the encounter becomes aggressive this escalates into screeches that increase dramatically until it's a crescendo of screaming.

16. Why are their ears red?

The ears are sparsely furred, with very thin skin. When they are stressed or very excited the ears flush with blood, making them appear red.

17. Why do they yawn?

The famous gape or yawn of the Tasmanian devil that looks so threatening, can be misleading. This display is performed more from fear and uncertainty than from aggression and is part of a displacement behaviour which means they redirect nervous energy to something that's harmless.

18. Why do they hold their tails up?

When they are very excited they hold their tail up, no doubt as part of the body language to demonstrate to other devils that they mean business. When they are very angry they will hold their tail almost straight up. The tail can be held in many positions and the subtleties probably have much meaning in communicating the animal's level of arousal or aggression to other devils.

19. How much can they eat?

If they are not interrupted, Tasmanian devils can eat up to 40 per cent of their body weight in 30 minutes. Devils have the ability to gorge feed, eating up to 40 per cent of their body weight in a sitting. Similar to other carnivorous animals, devils on average consume about 15 per cent of their body weight per day in the wild so even a huge feast like that would only keep them going for two or three days.

Many predators eat large amounts, the main reason being that they may not get to eat again for some time. Basically it is safer to have your food inside you rather than carry it around where it may be stolen.

20. What do they normally eat?

The Tasmanian devil is mainly a scavenger and feeds on whatever animal is available. Powerful jaws and teeth enable it to completely devour its prey - bones, fur and all. Native animals such as wallabies, possums and wombats are favourites while various small mammals and birds (and eggs) are also eaten - either as carrion or prey. Reptiles, amphibians, insects and even sea squirts have been found in the stomachs of wild devils.

Carcasses of sheep and cattle provide food in farming areas. Generally dead cows can only have small bits eaten because the skin is too thick for Tasmanian devils but they can burrow inside and eat them from the inside out. Whole sheep can be eaten except for the large bones. New born lambs are sometimes at risk and poultry that roosts on the ground are also vulnerable however most healthy stock is perfectly safe.

Tasmanian devils maintain bush and farm hygiene by cleaning up carcasses. This can help reduce the risk of blowfly strike to sheep by removing food for maggots. They are opportunists and prefer to eat carrion as they don't have to expend energy in hunting, however, in wilderness areas where there is not much carrion, Tasmanian devils hunt a lot.

21. Why are some individual so dominant when feeding?

Basically, the most motivated (usually the hungriest) animals are the most dominant. If all individuals were of the same hunger level the largest one would likely be the most dominant.

But Tasmanian devils vary enormously in personality. Some individuals are very calm and tolerant, others are excitable. It is possible that some animals seen feeding peacefully together are close relatives and therefore are more tolerant of each other. It is also possible that they are not so hungry and so not motivated to fight over food.

22. Why do they have fat tails?

Most marsupials store fat in their tails and a fat tail is usually a sign that an animal is in excellent condition. Old males have the fattest tails.

23. Why do they fight so much?

Fighting – often superficial fighting without serious contact – is the basic mechanism for establishing pecking order. The famous gape or yawn of the Tasmanian devil, which looks so threatening, can be misleading.

This display is performed more from fear and uncertainty than from aggression. Tasmanian devils produce a strong odour when under stress, but when calm and relaxed they are not smelly.

24. Do they injure each other?

Very occasionally, mostly when they are fighting over mates or during mating. They rarely injure each other when fighting over food.

Most Tasmanian devils with injuries on the face are adult males. Many of these injuries have been gained at the end of a mating period when the female fights off the male. Some of these injuries are obtained when males are fighting other males for access to females. Very few injuries are caused by squabbles over food. Some wounds are from shards of bone cutting them as they crunch through it.

Some devils have scars on the rump which are mainly caused when animals back into other animals to try and push them away from food. Basically it is safer to be bitten on the very heavily armoured, thick skinned rump than on the face. Similarly they get bitten after aggressive encounters where the loser turns and flees and the victor snaps at their rump. Scars on the neck usually indicate the animal is a female. The scars are caused by males holding the female to subdue them during mating.

25. Do they have predators?

In the past thylacines were no doubt predators of Tasmanian devils. Small Tasmanian devils, or imps, come out in the day; they are at risk from large birds of prey such as eagles, and very small imps are at risk at night from large owls and quolls. Almost certainly large Tasmanian devils will eat imps if they are hungry enough. Imps can climb well and this possibly helps them to escape from large predatory Tasmanian devils.

26. Why are some individuals wary and others confident?

Like people or any other animal, Tasmanian devils vary immensely in personality traits. They also vary in experience. Animals that have not been frightened or harmed will appear very confident. Animals that have been traumatised or hurt will be wary. Like many multiple litters, Tasmanian devils can have different fathers for the same litter, therefore personality traits can vary because of different fathers. Generally they are very wary and that's why they are difficult to see.

27. Do they come out in the day?

In the wild Tasmanian devils are nocturnal (active after dark) if they are in areas frequented by people. In the true wilderness they do come out in the day. During the day they usually hide in a den, or dense bush. Where they are not harassed by people or dogs, devils love to very quietly and discreetly sun bake. Devils of all ages do this. Devil imps have been seen out sunning themselves together with lizards, which they would usually eat, Young weaned devils are "crepuscular" coming out at dusk and dawn in the twilight. Don't be fooled by the devil, they are around when you don't see them.

28. What controls their numbers?

The greatest current threat to numbers across Tasmania is Devil Facial Tumour Disease (DFTD). It is a fatal condition, restricted to Tasmania devils, that is characterised by cancers around the mouth and head. In 1996, Tasmanian devils were photographed in north-east Tasmania with large tumours on their faces.

Since then there has been a 95 per cent decline of average spotlighting sightings in that region, and a drop of 80 per cent across the State.

In the past competition and perhaps predation from thylacines would partly control Tasmanian devil numbers. Other factors affecting numbers included food availability, direct persecution, competition from other devils and quolls, the loss of den sites to development, rodenticides and the toll of road kills.

29. Do they have diseases and parasites?

Tasmanian devils carry a number of internal and external parasites. They often have small numbers of ticks, tapeworms, and other parasites. Of greatest concern now is DFTD.

30. What are they related to?

Tasmanian devils are most closely related to quolls. Their next closest relationship is with smaller marsupials and a more distant relationship is with thylacines. They are more closely related to all other marsupials than placental animals such as dogs.

31. What does their Latin scientific name mean?

Their Latin name is *Sarcophilus harrisi*. That means Harris' meat lover. Harris is the name of the man who described them in scientific terms.

32. Are Tasmanian devils dangerous to people?

No, Tasmanian devils are not dangerous. They do not attack people, although they will defend themselves if attacked or trapped. For all their appearance they are very timid, quiet animals that would much rather run away than fight. However, devils are very powerful and any bite could cause serious injury. Tasmanian devils are wild animals and therefore should not be trusted with small children, just as you would not trust a large wombat or a large kangaroo with a small child.

33. Do they form packs?

As far as we know Tasmanian devils do not form packs – a pack being an organised group of animals of the same species. Large numbers may hunt in the same area and may even hunt the same animal, but they do not seem to be organised. Even so, the confusion they cause may give them an advantage over the prey as they know where each other is from the sniffs and snort sounds and contact calls which allows them to move around the bush hunting as an “unco-ordinated” pack.

34. Are they territorial?

Strictly speaking, they are not territorial. A territory is a defended core of home range. Tasmanian devils have fixed home ranges and a small mobile territory they carry with them. That is, they defend a small area of personal space.

There is much we do not understand about how Tasmanian devils arrange themselves in the landscape.

35. How far do they travel?

GPS satellite tracking has shown that many Tasmanian devils will travel up to 16 km in one night within their home range. They do not repeat the same movements every night. If they find food early they may not travel very far at all. We are not yet sure how far immature animals disperse from their parents.

Tasmanian devils roam considerable distances along well-defined trails in search of food. They usually amble slowly, with a characteristic gait, but can gallop quickly with both hind feet together. Tasmanian devils are agile, however, and can climb trees. Although not territorial, Tasmanian devils have a home range.

36. Were devils always in Tasmania?

Remains of species of Tasmanian devils, including some very large ones, have been found in fossil deposits in what is now Australia. Certainly devils have been in Tasmania for a very long time.

37. Were they in any other place than Tasmania?

It seems Tasmanian devils were spread all over Australia and they may have been in Papua New Guinea.

Tasmanian devils once occurred on mainland Australia, with fossils having been found widely. But it is believed the devil became extinct on the mainland some 3000 years ago – long before European settlement. While it is not known exactly what happened to the devil on the mainland, it is likely that devils became extinct there due to aridity changing climate and the spread of the dingo and possibly disease which was prevented from reaching Tasmania by Bass Strait.

38. Where Tasmanian devils always considered an icon?

Today the devil is a Tasmanian icon but this hasn't always been the case. They were considered a nuisance by early European settlers of Hobart Town, who complained of raids on poultry yards. In 1830 the Van Diemen's Land Co. introduced a bounty scheme to remove devils, as well as Tasmanian tigers and wild dogs, from their northwest properties: 2/6 (25 cents) for male devils and 3/6 (35 cents) for females.

For more than a century, devils were trapped and poisoned and they became very rare, seemingly headed for extinction. But the population gradually increased after they were protected by law in June 1941. During 1996 it became evident that Tasmanian devils were again under threat - this time from DFTD.

39. How many live in Tasmania?

It is very difficult to give an exact answer, with numbers thought to be within the range of 10,000 - 100,000 individuals. There are a variety of reasons why it is difficult to be more precise. One of the biggest challenges is that there are population number estimates for only a few places across the State – most of which were chosen for trapping because they were high density before Devil Facial Tumour Disease. Good estimates for anywhere in the World Heritage Area, for instance, aren't available because there are no roads and it is hard to check traps on a daily basis.

40. Why are Tasmanian devils active during the day in zoos?

They have learnt in zoos that neither people nor anything else will harm them in the day and that is when they are also fed so people can see them. Also they can become bored and interacting with people provides stimulus.

41. Why aren't they scared of artificial lights?

They actually are a little scared of artificial lights at first, but eventually realise that the light is not going to harm them. When other devils are about they are more concerned with competition.

42. What use are Tasmanian devils?

Tasmanian devils have enormous value. They are fundamental to our ecology at the top of the food chain. As scavengers they play a vital role as nature's auditors, removing sick, slow, diseased and dead animals from the landscape.

Tasmanian devils are a very important line of defence against introduced animals, particularly feral predators like cats and ferrets. Both species are devastating to native wildlife.

Tasmanian devils are intrinsic to the Tasmanian psyche, and an icon of wild Tasmania. They are a great example of wildlife succeeding against all manner of pressures, a true 'Aussie battler'.

43. If there are still thousands of Tasmanian devils left in the wild, then how can they be classified as 'endangered'?

There has been a decline across Tasmania of more than 80 per cent in average sightings per spotlighting survey since DFTD emerged. In the north-east region, where signs of the disease were first reported, there has been a 95 per cent decline (approximately) of average sightings.

Due to its alarming rate of decline, the Tasmanian devil has been listed as Endangered under Tasmania's *Threatened Species Protection Act 1995*, as well as the Commonwealth's *Environment Protection and Bio-diversity Conservation Act 1999*. The Tasmanian devil has also been listed as Endangered on the Red List of the International Union for the Conservation of Nature and Natural Resources (IUCN) – the benchmark for the global conservation status of plant and animal species.

It's hard for us to know exactly how many Tasmanian devils remain in the wild, but our best estimate is thousands of mature individuals. One of the reasons why it's difficult to be more precise is that there are population number estimates for only a few places across the state. Good estimates for anywhere in the World Heritage Area, for instance, aren't available because there are no roads and it's hard to check traps on a daily basis. As with all our information, we are reviewing these figures as we learn more, so they may change.

44. Why is it so important that Tasmanian devils don't become extinct in the wild?

We are already seeing the early signs of changes in the landscape from the decreasing devil population impacting on our agricultural industries as well as our environment.

The decline in devil numbers means there are now large amounts of surplus carrion in the landscape (up to 100 tonnes/day) and other carnivores are already responding to that surplus. One of the biggest threats is posed by introduced, invasive species – such as feral cats and dogs - which now have an opportunity for major expansion.

Devils eat a variety of insects, amphibians, reptiles, birds and mammals. If they are not there to eat them, what is the result? In some areas devils predate on brush tailed possums. No devils mean more possums which means more browsing of certain plants which in turn could mean fewer flowers for a certain insect and so the cycle of life creates change.