Chapter 2. Recovery Action Plan.

This chapter is divided into two sections. The first suggests what should happen if a Tasmanian tiger is filmed or captured alive, and the second shows a copy of a formal Recovery Action Plan which was drafted during 2002 in readiness for the author's own photographic proof.

All agree, the best, and perhaps the only way to prove thylacine existence is to produce a body. According to Paddle (p23) "the criterion for establishing the existence of the thylacine beyond 1936 can only be met through the production of a body, either dead, or preferably alive." It is rare to find a carcass of even the most common animal in the Tasmanian bush (usually eaten overnight by Tasmanian devils), so the chance of finding a dead Tasmanian tiger is effectively zero.

Capture of a live thylacine is more likely, and would be justified if it saved the species. Intentionally trying to capture a thylacine is not child's play however, as the species is extremely nervous, susceptible to shock, and could easily die if captured. Death of one among such a small population may cause more problems than it solves. Current stance of the Tasmanian government is that trying to catch a thylacine is illegal (even though the species is extinct), and fines are applicable. The author does not encourage people to try and catch a thylacine. If film evidence is substantial and clear, with a good amount of detail, then this will be enough to force authorities to act, and then they can take the risks.

The classic question among searchers has always been, "but if we do manage to catch one, then what do we do with it? And what do we do with the information?" Below are suggested protocols in case a thylacine is captured or filmed in detail.

Convincing film obtained: See the Recovery Action Plan below for a document framework of what to do next. This has a commercial contract ready for negotiation with one of the two main media companies in Australia (see Appendix 1). Dealing with one media company only will channel most of the financial value of the film to where it can help the thylacine most.

Live animal captured: If a live Tasmanian tiger is captured, then the following actions should be taken immediately. The location of capture must not be revealed under any circumstances.

A) Start filming with two video cameras at different angles; one up close, the other further away; it is very difficult or impossible to hoax two different camera angles of the same thing.

B) Use a scalpel to take a small segment of flesh from one ear, then place that in a container of 70% alcohol.

C) Take a blood sample using a needle and medical blood container, then put the sample immediately on ice.

D) Take a large sample of hair and place that in 70% alcohol.

E) Place a suitable radio collar on the animal, then release it immediately where it was caught.

The time length of capture should be minimized, and under no circumstances should the animal be held for later examination, or moved to any kind of enclosure. The purpose of any initial capture should be to prove to the world that the species exists – society and the TNPWS can argue among themselves what to do about it after that.

The type of radio collar used should have as long a range as possible, and preferably a GPS element to its function, which will work in the thickest rainforest gullies. Radio collar technology is improving rapidly, and there are several manufacturers on the Internet. The collar itself should be designed to break off after a year or so; sew the collar together with thick cotton thread in one section, which will rot over time to release the collar.

With the above in mind, anyone who believes they want to help the thylacine by attempting to catch one, should consider having on hand at all times; two operational video cameras, vials of 70% alcohol, a couple of sterile needles/blood containers, a sterile scalpel, insulated ice pack and a radio collar. All traps must be professionally made so animals have no chance of being injured, and traps must be checked every morning. If you can't be bothered with those things, then you are not doing the job justice. Remember that this is an illegal activity, with risk of death to the captive.

THYLACINE RECOVERY

photograph

ACTION PLAN

Written By July 2002 Copyright 2002

Introduction.

The author has spent four years searching for the thylacine; originating from outside Tasmania, starting from a point of zero knowledge. The eventual filming of a wild thylacine required a comprehensive understanding of the species; history, biology, ecology, habits, current distribution, vulnerability. With no certain knowledge of behaviour or ecology in the literature, it was first necessary to understand all other Tasmanian mammals before attempting to track the thylacine.

The author achieved these things alone, unaided, self funded, and also holds two degrees in environmental science/terrestrial ecology. The author is thus qualified to propose this initial action plan.

Contents are as follows.

PART A. - Address to the Nation
PART B. - Proof of existence
PART C. - Media negotiation & contract (see Appendix 1.)
PART D. - Thylacine Recovery Action Group
PART E. - Future protection & nurturing

It is hoped that this document will provide a framework for recovery activities to begin without delay.

PART A.

Address to the Nation - written by

10/7/2002

Oral delivery:

This is an address to the nation of Australia, and to the world.

Ladies and Gentlemen, the thylacine has been rediscovered in Tasmania after being presumed extinct in the wild for seven decades. This is the greatest survival story we have ever known, and many years will no doubt pass before we fully understand it.

The Tasmanian tiger was once regarded as the most worthless and cowardly animal in the bush. We are now beginning to understand the true value of this species; living link to Australia's lost megafauna, superb example of convergent evolution, wrongly accused sheep killer, target of an entire society, victim of epidemic disease, tragic lost heritage, object of guilt, legendary icon, magnificent survivor with the power to shock the world. Through only its own strength we now have a second chance to protect and nurture the thylacine. A second chance at conservation.

Does the Tasmanian tiger have value? Anyone who answers that question with "of course" should remember that less than 100 years ago our own society not only regarded this species as worthless, but paid money to be rid of it. The last thylacine languishing in a zoo in the 1930's died because it was mistreated - locked out of its shelter during a week of extreme temperatures.

It is sad that I need to ask if the thylacine has value or not, but then, this is a sad story... The thylacine is a predatory wolf-shaped marsupial, with a 30 million year fossil history, that once occupied Tasmania, all of mainland Australia and New Guinea, along with a huge diversity of other megafauna. These included giant wombats & kangaroos, enormous goannas, land-based crocodiles, and lion-like marsupial predators. Australia's amazing diversity of animals rivalled any in the world, and also included five other species of thylacine, most smaller than the Tasmanian tiger.

Every Australian native animal species weighing more than 60kg died out around 20,000 years ago, as well as 75 percent of all species weighing more than 10kg. This is thought to be an effect of Aboriginal populations. One thylacine species survived that mass extinction; the only large carnivore to do so. It continued to survive with reduced prey diversity, and competition & predation from Aborigines, so it already proved itself to be a survivor of ages.

Around 4,000 years ago the dingo was introduced to Australia from Asia. This started a rapid decline in the thylacine population, as the dingo has the same life strategy, and is thought to occupy that ecological niche more efficiently. Either through competition for food or direct predation, the dingo is thought to have caused extinction of the thylacine on the mainland and in New Guinea by the time Europeans discovered Australia.

But the dingo never made it to Tasmania, and so when colonisation and sheep farming began in the early 1800's, the curse of Van Diemens Land was identified - an evil, vampirous tiger, crazed insatiable sheep killer, a cowardly, stupid, worthless pest.

Detailed historical analysis now shows most of that negative image was seeded in the early years of colonisation, when irresponsible farm managers found a convenient scapegoat for sheep losses. The media and an apathetic society fed a snowball of hatred for the Tasmanian tiger, which started one of the most ignorant and vicious extermination campaigns the world has ever seen. Latest research suggests the tiger was never a significant predator of sheep. It was often blamed for losses caused by wild dogs, escaped convicts or Aborigines. It was wrongly accused. Early settlers were scared of the Tasmanian tiger, though it never killed a single European.

The Tasmanian tiger was hunted and killed by the white man at every opportunity for 100 years to 1908, and yet it survived, even with a government bounty scheme paying a month's wage for every dead tiger during the Depression. The Tasmanian emu was hunted to extinction by 1850, and that was without a bounty on its head. Hunters and trappers scoured this small island killing tigers directly and also laying strychnine baits along fur trap lines.

The government bounty almost achieved its aim; between 1908 and 1910 the thylacine population collapsed. A combination of hunting pressure and a serious epidemic disease caused virtual extinction. Over the next 20 years lone tigers were picked off as they travelled in search of mates, or wandered with the effects of disease. The last known thylacine died in the Hobart zoo in 1936 - two months after the species was given official protection.

Searches were launched to confirm the wild population, but no proof of existence was found. Intelligent people devoted their lives to capturing or even photographing a thylacine, but they were unable to do so. More than 200,000 snares have been set since the 1950's, specifically to catch a Tasmanian tiger. One search team covered much of the area of Tasmania on foot looking for tigers without success, and automatic cameras have been used since the sixties. The thylacine was declared extinct by international standards sixteen years ago.

Despite the application of all of our intelligence and technology, no proof of existence was found - not one tourist photograph of this large striped animal, not one tiger found dead beside the road, not one confirmed thylacine caught in a trap intended for another animal. All logic said the species was extinct.

But the thylacine defied logic. It managed to survive and adapt to the disease of 1908. The harshest of unnatural selection left only the few strongest and most intelligent tigers; those that learned to avoid humans at all cost. Fragmented populations managed to regroup in three or four isolated pockets, and so the species went to ground and reinvented itself; mothers teaching cubs to stay alert, not stray, avoid humans. Bouncing along the knife edge of extinction into the 1960's, the thylacine population slowly stabilised.

Then during the 1960's, a man-made imbalance in the number of Tasmanian devils started causing increased predation of thylacine young as they were left behind in the den. Over the past twenty years there have been more Tasmanian devils than at any time since European settlement.

Historically and today, Australia's native marsupial wildlife has not received the respect it deserves when compared to European placental mammals. Marsupials are seen as an inferior, unintelligent, uncompetitive form of life. If the Tasmanian tiger managed to persist, and remain hidden against all of these odds, then all Australians have a reason to respect their native wildlife, for no other large animal on earth could be so elusive; to avoid humans for so long, in such a small place.

Now in Tasmania, after a crushing history of persecution as well as 200 years of habitat loss, the enduring thylacine survives. The magnificent Tasmanian tiger hangs on by its fingertips to face possibly its greatest challenge ever - the European red fox. And why is that? Because two years ago, a group of morons, purposely and illegally introduced foxes to Tasmania.

Continued habitat loss, competition & predation from dogs, cats, devils or foxes, and the possible outbreak of new disease, could all bring about rapid final extinction at any time. Cloning technology will never replace the species, or excuse our actions.

Only conservation will save the Tasmanian tiger. Conservation has never been about taking away jobs and prosperity, or locking up resources. It is simply an effort to recognise the value of what we all have, and then to make sure we don't lose it. So many people are aliens on their own planet. If you make an effort to really understand your native plants and animals, then you will love them, and then, you will want to conserve them.

The identity of any nation is not its motor cars or its television shows. It is its unique native plants or animals. To lose native species, or to gain foreign ones, permanently dilutes the identity of a nation.

The time for ignorance and secrecy is over. It has taken me four years and \$80,000 to reach this point. I will negotiate the highest price for this breaking news story, and donate every cent to help recover the Tasmanian tiger. Wherever you are in the world, there must be something you can do to protect your native plants and animals.

Additional text delivery:

So does the Tasmanian tiger have value? The thylacine has been a tourism icon, and a symbol of pride for Tasmania, generating income for the State - far in excess of even the alleged toll it took on sheep populations. Now following rediscovery, the economic benefit of its continued survival for Tasmania and Australia as a whole will be astronomical. This should satisfy the most apathetic of Australian society.

For the rest of us the value of the thylacine is clear. It is a fascinating remnant of the past, a majestic symbol of Australian pride and intelligence, a survival story powerful enough to mark a turning point in world conservation.

Europeans maliciously attempted to end a 30 million year thylacine fossil history, for the most ignorant and transient of reasons. In recent times Tasmanian society has been quick to reclaim the tiger as its own, but even quicker to give up on its continued persistence in the wild. The eyes of the world are upon us; if the thylacine does now truly become extinct, we will all pay a heavy price.

Prior to rediscovery we thought we only had one future - a future where we were eternally responsible for extinction of the Tasmanian tiger. Now we have two possible futures. The wild thylacine can survive and multiply if we allow that to happen, but it will definitely become extinct if we do not change land use practices and control feral animals in Tasmania. All Australians should now cherish this responsibility and deal with it honourably.

.....

Regards,

Magnificent Survivor - Continued Existence of the Tasmanian Tiger PART A – It Does Exist Now Chapter 2 – Recovery Action Plan

PART B. Document to Prove Continued Existence of the Thylacine (Thylacinus cynocephalus)

10/7/2002

To whom it may concern,

I hereby confirm that I have today viewed video tape recordings supplied byas well as plaster cast footprints and other forms of sub-proof evidence. This video tape shows a live thylacine in detail, and the other evidence is claimed to have emanated from that species.

It is my true and honest belief that this material is authentic, and that this is sufficient evidence to prove continued existence of the thylacine or Tasmanian tiger (*Thylacinus cynocephalus*) to this day. I believe the video tape recordings to be impossible to hoax.

Dr. Eric Guiler* - recognised leading thylacine authority; author of three benchmark texts on the subject, has devoted much of his life to gathering information and searching for the Tasmanian tiger.

Senator Bob Brown - came to Tasmania expressly to look for the thylacine. Conducted extensive systematic searches, established the "Thylacine Expedition Research Team" in 1968. Now Australian Greens Senator.

Signed Senator Robert Brown

Nick Mooney - Senior government authority responsible for thylacine matters.

Signed		
Witnessed by	Signed	
Address		

PART D. <u>Thylacine Recovery Action Group.</u>

Following rediscovery the author proposes immediate creation of a group of informed individuals to direct actions, recommendations, research, and funds allocation for maximum benefit of the remaining thylacine population. Structure and aims are suggested below.

Mission statement:

To harness all relevant interest groups in the identification and promotion of initiatives to assist the Tasmanian tiger (*Thylacinus cynocephalus*).

Composition:

An initial core group of individuals suggested as follows:

Dr. Eric Guiler* Senator Bob Brown Nick Mooney Col Bailey James Malley Ned Terry Bob Paddle Four officers from the Tasmanian Nat. Parks & Wildlife Service; to represent the

regions NW, NE, SW, SE Tasmania

Other necessary members identified and included later

Structure:

Optimal legal and/or administrative structure can be decided and created by the initial core group.

Schedule:

Fortnightly meetings for the first two months, followed by monthly meetings. Meetings could be chaired initially by the author, followed by selection of a leader by vote.

Funding:

A "Thylacine Recovery Trust Fund" account will be created by the author, to hold all proceeds from negotiated media release of the initial breaking news story and associated video tape. Those funds will be available to the Thylacine Recovery Action Group to administer as desired. The TNPWS or other parties are able to submit proposals for consideration and possible funding by the action group. The trust fund will be available in future to hold public donations and other forms of revenue. By numbers alone the TNPWS would play a dominant role in the action group.

* Dr. Eric Guiler has since become unavailable to act in these capacities

PART E. <u>Future protection & nurturing.</u>

The thylacine obviously does have enormous value, and so we must now protect and nurture the species. The following measures are proposed by the author at this initial time.

Immediate actions:

- Increase funding for present and future fox eradication programs in Tasmania
- Increase measures to control feral dogs and cats in Tasmania
- Identify all causes of the current high Tasmanian devil population - Suggest responses

- Identify all causes and impacts of the epidemic disease which is now affecting Tasmanian devil populations

- Confirm if this disease affects other marsupial carnivore species

- Specific land use changes:

- Place an immediate moratorium on all logging in Tasmania's virgin/old growth forests

- Control clear fell logging or land clearing practices in all areas

- protect sensitive areas from all forms of habitat disturbance
- Halt use of poison in or near bushland areas pending confirmation of total impact
- Strengthen law enforcement in all National Parks and reserves
- Promote complete protection of all native wildlife in Tasmania
- Closure of selected forest roads to unnecessary traffic

- Formation of an action group or committee of informed people to prepare and activate a detailed recovery schedule as quickly as possible (see proposal Part D)

- Promotion of a single contact number for reports of thylacine sightings and all other information; with public awareness to allay fears of ridicule, and assure action will be taken

- Increase and clarify the fine for intentional or negligent destruction of a thylacine

If the thylacine is to be nurtured into the future then current attitudes in Tasmania must change. Thylacine related apathy continues within government agencies, as few State sponsored searches have been conducted since 1936, and all have been of limited scope. Specific government agencies have either given up on the thylacine, or accept that it exists, but keep their information secret; supposedly considering their own actions and attitude to be of more benefit to the species than those of private individuals.

Many people living in remote communities of Tasmania know their lives would change dramatically if thylacine existence was confirmed in their region, and they do not want it to be found. A culture of silence takes over as soon as the tiger is mentioned; the local Wildlife Ranger is the last person to hear about it. It should come as no surprise that the average farmer or hunter in remote communities would shoot a thylacine if the same suddenly appeared in their gun sight.

Prior to most commentators agreed that if the thylacine still existed, then it was in desperate trouble. What few seemed to have considered is the obvious fact that society would not act to protect a species it thought was extinct. It was therefore logically necessary for someone to prove continued existence in order to save the species.

That means irrefutable proof of the thylacine existence was necessary if we were to have a chance at saving the species. Once proof of existence was established, and a recovery action plan enacted, then informed people could gather to decide the best conservation strategies. This was the author's motivation for working to prove continued existence of the Tasmanian tiger. This four year search and eventual filming was not conducted in association with relevant government agencies. These bodies have projected an impression of patronising arrogance in dealing with thylacine matters, and have generally not shown enthusiasm to locate the species. This combined with the threat of government interference logically does not invite private searchers to disclose their activities. There are competent, dedicated, ethical and responsible people working privately to save the Tasmanian tiger - given that the rest of the world had given up on it, then these private individuals should now be encouraged. The importance of this issue warrants understanding and tolerance from government agencies.

With the above in mind, if we are to nurture and protect the thylacine into the future, then the following attitudes need to change:

A) Relevant government agencies need to show greater enthusiasm toward the thylacine, and end their patronising attitude toward private searchers or sighting reports. They need to make serious informed policy in perfect isolation from the other irrelevant government agencies which will certainly now seek to influence them.

B) A large part of Tasmanian society needs to move away from colonial ignorance to find greater respect for native wildlife, and finally accept their thylacine for what it truly is.

Through only its own strength, the Tasmanian tiger has given us all a second chance at conservation; in fact conservation may never be the same again. Now that continued existence is proven, the author looks forward to working closely with relevant government agencies and all others concerned - to ensure we make the most of this historic and priceless opportunity.

Regards,

.....

Chapter 3 - Current Population Status.

Many people have recently seen Tasmanian tigers and some have devoted a lot of time to finding the animal. There is a large reservoir of knowledge of the current population status of *Thylacinus cynocephalus* but it is fragmented and needs to be gathered as soon as possible. This chapter summarises relevant opinion of the author at the time of writing. Conclusions are drawn from logical analysis of available habitat, necessary isolation, frequency and detail of current sightings (those not kept secret by the government). Conclusions are also drawn from historical distribution, and also from the author's own field work or sub-proof evidence.

Three population groups exist within Tasmania; in the North East forests, North West, and in the South West World Heritage Area. Thylacines frequently move between the two populations in the west (the bush cover is contiguous), however there is little movement from west to east. Movement of thylacines within the North East population extends down to the Buckland military training area. The South West wilderness provides the greatest sanctuary due to its size and remoteness, even though much of the habitat is not ideal for the species.

The total number of thylacines in existence today is probably around 200, of which about half live in the South West, 70 or so in the North West, and around 30 in the North East. Population size is "stable" in the west, but numbers are unstable, generally declining in the east. If that estimate of total number is inaccurate, then the true number of thylacines will be lower, not higher.

I believe if thylacine numbers in each of these three divisions were any higher, then the animals would not be able to remain hidden within the available habitats. If the numbers were any lower then it is unlikely the species would have been able to sustain itself to date.



Plate 39. Current possible thylacine distribution within Tasmania

South West:

Much of the interior of the South West World Heritage Area is very thickly vegetated, and relatively difficult for thylacines to hunt in or move through. Habitat in these areas is often gloomy rainforest with a moss understorey which does not support large herbivore populations. Open areas are usually wet highland button grass plains/heath on poor soils; also of limited value to herbivores.

Consequently thylacines were historically confined to areas around the perimeter; along the west coast strip of heath/dune/forest edge, or at the eastern and northern edges of the wilderness. Human impacts exterminated all thylacines on the eastern edges before the 1920's, however Adamsfield, the Florentine valley, or areas directly to the north continued to produce tigers after that period. This is because some thylacines moved out of the interior forests to the edges, or along the Port Davey track(s) from west to east; reaching human disturbance in the region of Adamsfield.

Though mostly unfavourable for thylacines, the south west quarter of Tasmania is vast and undisturbed; providing a stronghold for the remnant population. As mentioned, probably around 100 thylacines persist in this area, mostly now in the deep forests. Populations of prey animals are far higher now than in the past, so there is plenty of food even in the thickest rainforest. Some thylacines still occasionally wander across to Adamsfield/Clear Hill/Florentine, or to more northerly regions. The SW population is generally stable, but desperately vulnerable like all others, to possible new disease, impact of feral animals (particularly foxes), devil predation, disturbance, or the long term affects of inbreeding.

North East:

A small population of thylacines has persisted in mountainous areas to the north and east of the Ben Lomond massif. There is occasional movement as far south as the Buckland military training area. Thylacines disperse southward, and attempt to establish new home ranges, but encounter disturbance (vehicle noise, logging activity, gunshot noise), and either manage to survive alone in isolated pockets, or return to larger bushland areas in the north. Males sometimes wander southward from the northern forests in search of mates during March-June and usually return.

This population is unstable/continuing to decline due to the effects inbreeding, devil predation and stress from frequent disturbance. Sleeping places in the north east are most frequently in cavities with many exits among boulders piled on top of each other, also in eroded sandstone caves, thick patches of vegetation or burnt hollows at the base of eucalypt trees. High peaks such as Ben Lomond, Mt Barrow, Ben Nevis, Mt Victoria or St Paul's Dome/Mt Foster provide both a maze of strewn boulders, and a degree of isolation, however logging activities are a constant source of stress for thylacines on the eastern side of Tasmania.

North West:

The North West quarter of Tasmania seems a sad example of rampant human exploitation (primarily clear fell logging), however the remaining semi-disturbed wilderness areas in that region are quite vast, and in the past many commentators have stated that this is the most favourable habitat for thylacines. It is logical to suggest around seventy thylacines live (or have been living) in the North West. The population is now mostly confined to the deepest ravines in the most isolated tracts of central rainforest, though undisturbed highland forest is also favoured.

I put the words "have been living" in brackets because I understand the previously undisturbed central rainforest is now set to be logged, with an entire industry shift toward the use of virgin rainforest timbers. The federal election result of October 2004 provided certainty to this, and also demonstrated that trying to provide greater protection to Tasmanian forest habitat is not a popular thing to do.

Centres of human activity are rarely approached due to shooting and trail bike noise, or night lighting. Over the past 30 years logging activities have disturbed thylacines in dryer forest areas, keeping some individuals "on the run" from one disturbed area to another. Human activity means coastal dune and heath habitat north of Strahan is rarely occupied.

Thylacines resident in rainforest/wet heath have darker fur colouration than animals which live mainly in the highlands. Stripes are not clearly visible on many of today's thylacines, particularly from a distance; the animal appears chocolate brown. This occurs to some degree in all populations. Existence of colour variation supports the notion of localised populations and territorial behaviour. Distribution is thus linked to behaviour and psychology.

Chapter 4 – Behaviour and Psychology.

This chapter discusses behaviour and psychology of the Tasmanian tiger. Given so little is known of the species that virtually the whole world thinks it is extinct, then reporting a sighting is asking for ridicule, let alone discussing psychology. There are good indications of behaviour in the literature however, and after six years' devotion to understanding the animal and tracking it through the bush, I feel I have become closer to this elusive personality.

Brief conclusions here are drawn from a combination of research and field investigation in all Tasmanian habitats. Again they are only opinion of the author at the time of writing. Comment is deliberately not supported by literature references. Existing literature has been "referenced to death", and other authors have already identified support for much of the comment made here.

The name "Tasmanian tiger" is thought by contemporary scientists to refer only to the stripes, as there is little other resemblance to a true tiger, and so the term "thylacine" is now preferred as a more accurate name (being an extract from the species' scientific name referring to a pouched dog). However these contemporary scientists have not seen the animal walk in the wild. When a thylacine (particularly an adult male) walks naturally it very much resembles a large cat, and hence the name "Tasmanian tiger" came as much from behaviour as from appearance. Old zoo film shows the animal pacing nervously like a dog (because the camera & intruder are present), however this is not the natural walking behaviour. Early colonists thought the animal to be a form of panther; again due largely to its method of locomotion. The term "Tasmanian tiger" is thus a very good name for this species.

Today's Tasmanian tiger is very alert and intelligent. They frequently cross or walk along tracks or roads, but they know when a vehicle is approaching, and they hide as it passes. They can become quite tolerant of regular road traffic. Thylacines are occasionally surprised on a windy day when they cannot hear approaching cars as well, have the noise of running water in the background, or are looking into the sun. Adults generally have a high level of awareness 24 hours per day; hearing, eyesight and sense of smell are all superb. Bird alarm calls alert thylacines to human intruders; they sight the intruder from a distance, then retreat long before they are seen. Of course some individuals relax from time to time, which leads to infrequent sightings.

When Europeans colonised Tasmania, those people preferred the fertile, open, low lying areas; which had previously been occupied by Aborigines for the same reason. Aborigines have hunted thylacines in Tasmania for many thousands of years, and so the thylacine species already had relatively safe routes and methods of movement/concealment from humans included in its repertoire of survival skills, long before the arrival of Europeans. This is one reason why the remnant population has been generally able to avoid detection when passing between areas which are currently settled.

Prominent mountains are the saviour of the thylacine. During virtual extinction of the early 1900's the fragmented population gravitated toward high mountains in isolated places; those that stand out among all others. This is how the shattered population managed to regroup, remain hidden, and consolidate its behaviour to face the new age.

Nowhere else in the known history of zoology has such a radical transformation taken place in such a short time. Yet synchronous consolidation of behaviour occurred in three or four isolated regions; rewriting the colonial concept of the marsupial as an inferior form doomed to extinction. A) Territorial behaviour.

Thylacines do establish a home range or territory, but will travel in search of a mate, or to establish new ranges. Most of this movement is conducted by males during March-June. Some individuals which occupy mountainous areas may routinely wander to lower ground during winter; then either return in summer, or stay in the lower location if it is more suitable than where they came from. Again most of this movement occurs during March-June. However others may not move at all during winter.

This seasonal movement means most thylacine sightings (and captures during bounty times) have occurred during autumn/winter. This is also the annual peak in thylacine numbers, as young are becoming independent at this time, and moving across the land to establish new territories. It is likely that colder weather increases the appetite, so if individuals need to range further in search of food, then this will probably occur during winter.

Distinction is made here between the terms "territory" and "home range". Thylacines generally occupy a loosely defined, rarely contested territory, but also smaller temporary home ranges within that territory. Territory size varies according to prey availability, and may be as small as 20km², or as large as 200km². Thylacines seem to wander within the territory at random, however they generally occupy smaller home ranges while food is abundant or they are not disturbed. These home ranges may be as small as 4km². Thylacines have an extremely good spatial memory.

Tasmanian tigers do not follow predictable patterns of behaviour; they rarely travel exactly the same path within a period of weeks. They will sometimes investigate baited traps or other things of interest, but only once. If disturbed a thylacine will avoid that immediate area (slight smell of anything unfamiliar can be enough), then either return after several weeks, or move to a different part of the territory. If disturbance is serious the animal may alter the territory to exclude an area, or move to an entirely new place.

Thylacines are highly mobile animals, with a loping running style historically claimed as clumsy and inferior to that of the dog. Yet this is the gait of the African hyena; perfectly adapted for endurance and travelling long distances (the animal was often mistaken for a hyena). Thylacines need not hesitate to move if disturbed. Members of the far less mobile Tasmanian devil species have been recorded to travel 30km in a single night.

If a new site is chosen the thylacine will establish a small temporary home range, then expand to consolidate a complete territory as long as the new area remains acceptable. Some thylacines react differently to disturbance than others, and the entire population is now far more reactive than it was during the 1800's.

There may be four or five main lairs or sleeping sites in a home range, which can be lined with ferns, grass and/or chewed wood. These are apparently used at random, as well as any other convenient cover. The tendency to move randomly within a relatively large area, and also to travel somewhere else once disturbed, makes predicting the animal's movements virtually impossible.

Territories of several adults overlap at prime feeding areas, so allowing males and females to meet frequently. There is association among males & females where territories overlap, however pair bonds are not strong and the male may spend time with several females during the year. A male may spend most of the year with only one female if others are not available. While together there may be cooperative hunting between males & females, and males may be compelled to defend females or offspring if danger approaches.

The word "together" can mean a male keeping track of a female's movements and remaining in the vicinity. After mating the male may wander in search of other females. It is probable that when times are hard (such as during the main bounty period), then bonds between all individuals become stronger.

B) Lairs.

Females favour one lair while cubs are weaning, and will leave young behind if they feel safe enough to do so. There is a period of 4-8 weeks when the cubs are too large to be carried during a hunt, but not yet able to follow the mother. During this time they must be left alone in a hiding place while the mother hunts, and it is this time when predation from Tasmanian devils or perhaps cats occurs (see Chapter 8). If foxes become established in Tasmania then it is certain they will prey on juvenile thylacines in the same way.

As cubs become more confident they follow the mother while hunting, or even participate in the hunt in a semi coordinated manner. There is usually no hostility between males and cubs, or other females with cubs, so at times all will move together.

Daytime sleeping places can be any covered area, including a thick patch of ferns or titree, however both one-off sleeping places and more frequently used lairs usually have escape options in many directions. Where available the preferred longer term lair is a cavity with many exits among boulders piled on top of each other. Longer term nests are lined with bedding material as described in Chapter 1.

C) Feeding.

Food in all areas is primarily Bennets wallaby, pademelon, or wombat, though most other forms of wildlife may be eaten opportunistically, including Tasmanian devils. Consistent with comments made by trappers and shepherds, thylacines usually tear open the rib cage of live victims and consume the lungs, heart, liver, and other meat if they are hungry. The throat may be torn out, and blood lapped up. Meat may also be eaten from the inside leg (the most easily accessible meat on the body of a wallaby).

Sheep were quite different from the traditional prey, and may not have been encountered often, so most thylacines did not recognise them as food. Some did however, and found an easy source of sustenance, so becoming habitual sheep killers. This still occasionally happens today.

Sheep are attacked the same way as other prey, but the ribs are often too strong, so the victim is left to die with a patch of skin torn away from the underarm. Some thylacines discover sheep nasal bones to be a good source of blood, and target that area or only the throat instead of working to break the ribs. Other examples of kill pattern are shown in Chapter 1.

Sheep usually sleep on a bedding hill during the night, which is where the attack starts. Thylacines run into the mob to select a victim, then chase it and grab it by the face to pull it to the ground; sheep and wallabies killed by thylacines usually have clean facial lacerations. Recent opinion in the southern range of the east coast is that sheep are "eaten out of their skins" however the author has seen this to be the habit of sated devils.



Plate 40. Farmer suspects this to be a thylacine kill because devils did not touch the carcass for days afterward. Note destruction of the nasal bones.

Wallabies or wombats are usually pursued until they tire, and become easier to cut off & pounce on. Vascular tissues such as lungs are filled with blood at this time, and the heart is pumping rapidly, so tearing out the ribs, throat or nasal bones will quickly access the blood. Warm blood and blood-filled soft tissue is the preferred food, leading to a once popular vampire myth. Hungry thylacines can consume all of a carcass, or scavenge, but when food is abundant the feeding behaviour becomes wasteful; the animals only consuming select parts of a live victim, and often killing more prey than they require.

For millions of years the thylacine has generally occupied a well defined niche within ecosystems where kangaroo and wallaby populations regularly spike to unsustainable levels with cycles of drought and flood. During times of unsustainable prey abundance, wasteful feeding behaviour has not put the thylacine out of balance with its ecosystem, in fact it performed a valuable stabilising function. When suddenly presented with a paddock full of sheep, rogue tigers were simply acting within their ecological niche, however it is not surprising that 19th century farmers developed a particular hatred for the entire species, and were thus keen to exaggerate and perpetuate myths such as vampirism.

According to Paddle the thylacine was never a significant predator of sheep, and at least one academic believes the species was probably not physically capable of pulling down and killing a healthy adult sheep (Documentary Video). I believe these observations are incorrect. The impact of the thylacine on the colonial sheep industry was obviously overstated, and society was wallowing in hysterical ignorance, but I also believe the species was not universally hated for nothing. Some thylacines became vicious, wasteful, habitual sheep killers. A full description is given later of an adult thylacine which I saw in 2002. That animal was roughly the same size as a panther, and it was abundantly clear that this individual would have zero difficulty killing a sheep.

As mentioned, thylacines prefer live food, but will scavenge if hungry. Juveniles or older tigers are more likely to scavenge than healthy adults. A juvenile thylacine is believed by the author to have torn out the ribs of the wallaby below and eaten the lungs/heart/liver (corroborative footprints were seen), even though the wallaby had been killed on the road 24 hours prior. In this case the arm was eaten on one side.



Plates 41 & 42. Wallaby carcass suspected to have been fed upon by a juvenile thylacine 26/5/02. The wire background was an attempt to keep the subject in one place longer for filming purposes

Note the skin of the throat has been torn away. Devils and quolls uncharacteristically did not mangle the wallaby carcass on this occasion, which may indicate they are afraid of thylacine scent. After years of using baited motion cameras (bait attacked by devils & quolls virtually every night), I have yet to see the same feeding pattern, although I have seen dead sea birds and domestic poultry with the chest opened, which in those cases was certainly not caused by a Tasmanian tiger. What is presumed to be the same juvenile thylacine once took two 700g unopened cans of cat food from the author's camp (corroborative footprints were seen again), and also pilfered a plastic shopping bag full of cooking accessories; the items apparently having no flesh scent on them at all. Some of those cooking accessories were strewn 200 meters away through the forest, and the rest were gone, indicating the bag was held high enough not to catch and tear immediately on the uneven ground.

There was a camera set on the wallaby bait of Plates 41 and 42 at the time, but the weather was extremely bad, and a moving branch had fallen in front of the motion detector early in the night causing the tape to run out (the motion detector was triggered by movement in the image). Below are images from the same camera on subsequent nights. The dates are in the American format. Bait used at all times was road kill.



Plates 43 & 44. Stills from motion activated IR video camera images

C) Type of intelligence

There are many forms of intelligence in this world, and the value of ranking is always questionable, however it can be said that the thylacine is not as "intelligent" as a dog (probably its closest ecological equivalent). As mentioned in Chapter 1, the brain size is 40% smaller. Most predatory species are more "intelligent" than their prey, so thylacines would logically be more intelligent than wallables, wombats, or the smaller carnivorous marsupials.

Historically Tasmanian tigers were known to follow people in the bush, hang around camp fires, or stand still for minutes when suddenly encountering a human. At times while hunting they have apparently not even noticed humans are present. The species was historically regarded as supremely stupid.

The puzzling question again arises; how can an animal now be so elusive, and avoid humans, snares, traps or cameras for so long, in such a small place, when it is not particularly intelligent? It certainly seems impossible for the thylacine to persist against such historical odds.

The answer to this comes from an understanding of present day thylacine psychology its type of intelligence. As discussed in Chapter 1, all dogs have now had a long and close association with the human species - there are few "wolves" left in the world. Even wild dingoes on mainland Australia are descended from domestic animals, and have a tendency to gravitate toward people.

Thylacines have apparently never had this association, and Aborigines have hunted them for tens of thousands of years. Tasmanian tigers are probably not as "intelligent" as dogs, but what intelligence they do have is very finely tuned to avoiding their main predator; humans. Severe persecution during the bounty periods cemented this as never before. So now all individuals are instinctively alert, wary, and able to avoid detection through a range of random, elusive behaviours. That combined with extremely low numbers, makes them very difficult to locate, let alone film or catch. Tracking thylacines has been likened to looking for a needle in a haystack, however in this case, just as you get close, usually before you know it, the needle gets up and moves somewhere else. No other animal is so finely tuned to avoiding humans.

The Tasmanian tiger is clearly as elusive as any animal on Earth, but it did historically have one failing; it had a one track mind. The thylacine brain was limited to focusing on one thing at a time. Curiosity could occupy the entire awareness, so the animal often appeared stupid and vulnerable. This was particularly evident when thylacines were hunting, as they often focused completely on that task and ignored everything else.

This "one track mind" was genetically inherited, and adequate in pre-European Australia. However that trait was the first to disappear during unnatural selection of the bounty period. Some remnants of the trait do remain however, and this is the most common reason for current sightings.



Plate 45. Author's representation

The sum total of all of this comment on intelligence is that the thylacine has a very strange psyche when compared to the familiar dog. This comparison is made too often, and limits the ability of a searcher to truly understand the marsupial Tasmanian tiger.

Behaviour and psychology is the foundation of a magnificent survival story. The thylacine's truly amazing possession is not its stripes or pouch; it is its brain. This species has a mentality totally unlike any other on Earth, even among marsupials. Its incredible marsupial brain has defied a colonial society intent on destruction, frustrated searchers for seventy years, and pushed the scientific community into disbelief. It has tricked us all.

Again, the Tasmanian tiger is described as a ghost species, even by people who have seen it - what an incredible animal this is; what a rare privilege to see one.

Chapter 5 – Author's Sightings

It is true that many people have seen Tasmanian tigers since the last confirmed specimen died in 1936, however nowhere in the literature are any of these sightings described in detail. This chapter offers a detailed description of the two thylacines that I have seen.

It is strange how a life can be altered forever within a few seconds. At 3pm on 22/5/02 I was checking a muddy area beside a forest logging track. The day was windy with patches of cloud. Nothing there but the usual devil and wombat prints, so I climbed back into the car and kept going. The strategy for the prior few days had been to drive as fast as reasonably possible and hope that any animals on the track would be surprised by the speed of the car. This day followed four years of hard tiger searching in all areas of Tasmania, with no irrefutable thylacine evidence in my own mind whatsoever.

So there I was driving fast around a corner a few hundred metres past where I had stopped to look for prints, and rounding a bend I saw an animal on the track. The next few seconds are described as follows.

The animal was walking slowly along the track facing me, and I could see that it was quite slender, but still about the height of a medium sized dog. The colour appeared chocolate brown with golden tinges on hair around the edges of the body. The sun had broken through and was shining in the animal's face. Its head was down casually sniffing the ground, and it took a second or so to realise I was approaching. As I saw the animal I said to myself "now what's that?" One of the video cameras was on my lap, but there was no time to pick it up and turn it on. Instead I chose to speed up and get a close look at the animal before it ran away. At the time I had no expectation it was a thylacine.

As I approached at high speed the animal looked up suddenly, then turned, and ran to the side of the track. I clearly saw an unmistakable thylacine shape and loping running style. As it reached the track verge the animal bounded about 3m across a gutter cutting. While it was stretched out in mid air several images were burned in my mind; the sharp back hocks and tail continuous with the body, the large head and round paw-like front feet, the deep chest. The body hair was short and smooth. The animal used its tail as a rudder while in mid air.

Once it reached the bush it was gone. I ground the car to a halt, alighted ASAP and ran after it with the camera going, but there was no further sign of the animal. I hoped that it had gone to ground and was hiding close by, so I was ready to film as it broke and ran away, but that was not to be. Returning to the car I immediately made a drawing of the animal, and a copy of that original is shown below.

Plate 46. Copy of drawing made immediately after sighting 22/5/02

I could not see the stripes, but I tell you I did not need to. Tigers in high rainfall areas are said to be darker (Paddle p.45), and while it was running I would not have expected to see the stripes anyway. The closest I got to this animal was about 20m, and the total sighting lasted around six seconds. It was definitely a juvenile thylacine about 18 inches tall.

Written history says the Tasmanian tiger was a slow, clumsy runner, but this one was certainly agile, and I would not say that it was running slowly. I expect the speed of the car, noise of the wind, and the sun shining in its eyes were the reasons why I surprised it. Also the fact I had previously stopped the car meant there was no long lead up of engine/tyre noise as the car approached. In addition to all of that there was a nearby flowing creek to mask the vehicle noise.

Inspecting the ground where it ran I found the footprints and cast them (there were no others to confuse). That night I stayed in a cabin at a caravan park and analysed the prints. They were not clear because the animal was running through stony road base, but some of the substrate had been previously disturbed and was quite loose and deep, allowing usable casts.

The prints I cast that day could easily be confused with some casts I had previously made of Tasmanian devil footprints. One reasonably clear, deep front print cast from the disturbed road base appears the same as some casts from a devil front foot, but the fifth toe (thumb) is higher. Sometimes devil fifth toes are pushed higher by uneven substrate, so if I had not seen the tiger I would have said that print was made by a very large devil.

The other prints were not particularly clear, however one back print was obviously not from a devil (see Plates 47 and 48). The print had a far more rounded pad, and the two middle toes were clearly further forward than the others, though loose sand had fallen back into the depressions.



Plates 47 & 48. Rear left print from a juvenile thylacine 22/5/2002

The next morning while leaving the caravan park I asked the woman at the front counter if she thought tigers were still around, and she said "forget it they're gone" in a rude and angry tone. Later I bought two roast chickens and some cans of cat food. I still defy any carnivore to refuse hot roast chicken, and cat food is good because it has a very strong smell (needs to satisfy finicky cats).

At 4:30 that afternoon (23/5/02) I was back at the same spot, parked on the side of the track with the back of the car open before a long straight section; preparing for a long night vision stake-out with an invisible infra-red spotlight. At about 5pm the light was fading so I spread the chicken and cat food along the track. After that I returned to the car, then walked across the track to wash my hands in the same creek which had created noise to muffle sound of the approaching car the day before. I carried a video camera at all times.

After washing my hands I was walking back across the track to the car with video camera in hand, looked down the track and saw a large animal walking across about 150m away. Instantly I recognised it as an adult thylacine.

This second animal was very large, with shape and size similar to a panther; longer in the body than the juvenile seen the day before. It was walking casually across the track apparently unaware that I was there. Its head was held quite low as though it was tired, but its general walking gait was very stealthy; a creepy, flowing, robotic walking style I have certainly never seen before. The back line appeared to stay the same while the legs moved underneath. I immediately made a drawing of the animal on the same page as the juvenile sighted the day before:

Manager and Fisher estimation

Plate 49. Copy of drawing made immediately after sighting 23/5/02

This animal was the same colour as the smaller one seen the day before; like the colour of a Tasmanian pademelon, but a more solid, intense, velvety brown. I could not see the stripes, which is not surprising from that distance. Again I tell you that I did not need to see the stripes. The shape of this animal was absolutely, unmistakably thylacine, with the longer body of a large adult male. The shape was perfectly silhouetted against the pale road base of the track.

On this second occasion the video camera was in my hand, but the animal was already half way across the track when I saw it, and by the time I gasped at what I was looking at, there was not enough time to raise and start the camera. The video camera I was using had a four second delay before images were actually recorded. It started recording a literal split second after the tail vanished into the ferns. "How convenient" is the return comment, but all I can do is state what happened. The duration of this sighting was around five seconds.

In hindsight on re-examining the place, I could have climbed a hill and possibly filmed the animal as it was walking away through a semi-cleared area. I also could have whistled at it to possibly make it stop for a moment on the track. However at the time I made the mistake of thinking that it would walk past there again, so chose not to disturb it. The next day I cast two very large prints from the spot where this adult had walked, but they are not clear enough to be of any value (the ground was too hard).

For two years (full time) after those sightings I intensively and secretly hand and autocam filmed that stretch of track and more others in the region than I care to remember, but I have not seen those animals again, or any other four legged animal larger than a wombat. I have managed to cast convincing thylacine prints every few months however, and on one occasion a large animal coughed at me as it ran away through the undergrowth (mentioned briefly in the next chapter); without the ubiquitous hopping sound of a large wallaby. The kill pattern shown in Plates 41 and 42 was photographed at the same spot where the juvenile was sighted, three days after the sighting itself.

Sightings don't mean anything – so what, it was probably a "half starved Alsatian" that I saw; as wildlife officer Nick Mooney said of a different reported sighting (Documentary Video). Keep in mind however that I had been looking for tigers intensively for four years prior to these sightings; I had seen hundreds of devils run off the road, deer, goats, wallabies, thousands of sets of eye shine, all sizes and shapes of dogs (some half starved); day and night in all settings.

With no irrefutable proof, having wasted a lot of money, I could see no way forward with the search prior to those sightings. I would not have subsequently spent two years of my life and a further \$30,000 dollars to secretly, full-time, try & film those same two animals, if I was anything less than 100 percent certain of what they were. I bought a house in Tasmania for that purpose only! Text of this book should demonstrate to you that my mind is clear and reasonable. I would recognise a thylacine if I saw one, and I have no reason to lie.

Consider also in this case that two different animals were seen one day apart, essentially at the same spot. These two animals were quite different in size and body shape, yet both were unmistakably thylacine. Direct corroborative prints were taken from one of the animals moments after it ran across the ground, and in that same area I have since cast new prints of what appear to be several different thylacines. By that I mean a four or five probable casts every few months, after rejecting the thousands of devil, wombat, and unknowns. I have never seen dog prints in that area, and in my experience wild dogs prints are quite rare in the remote Tasmanian bush. Other suggestions of thylacine were also seen at that place, including the corroborative kill pattern of Plates 41 & 42 a few days after the sightings themselves.

Over the past two years I have cast about 30 of what are believed to be definite thylacine prints from that area, and another hundred or so convincing probables.

Briefly with regard to footprints, cast or otherwise, the next comment from Nick Mooney is that prints can be easily hoaxed. Very true, but why would I do all this undercover work on the foundation of my own hoaxed prints?

INTERMISSION

The chapters above have presented an argument supporting continued existence of the Tasmanian tiger to this day. The following chapters 6 - 9 discuss factors affecting continued existence of that species into the future.

Before anything substantial can be done to help the thylacine species, the world must first believe that it exists. It is not enough to leave the animals alone to "breed in peace", and it is not enough to wait until proof comes by accident. Action is required to prove existence now, and that means the animals need to be located.

Chapter 6 – Locating the Tasmanian Tiger

This chapter is intended to help anybody who is interested in proving the Tasmanian tiger still exists. It discusses evidence to look for in the field, and also the difficulties associated with a thylacine search. If I had this information when I started, as well as the behaviour/psychology comment in Chapter 4, then my life would have been a whole lot easier.

Working to prove thylacine existence is not a competition; I am not concerned who proves the tiger still exists, as long as somebody does, does it soon, and does it responsibly, because this incredibly important species is obviously on the edge of extinction. The aim here is to get as much information out as possible, so I am personally doing all I can to improve society's field knowledge. That way the information might help someone find proof of existence sooner than they would otherwise. I am not brave enough to expect I will be able to do it myself, so the next best outcome is to help everyone else.

The balance here is that the wrong people may use the information, but all public awareness campaigns carry that risk. The overriding principle remains; there can be no protection for the Tasmanian tiger until the world believes it still exists.

It may be seen as naive to freely offer this information, as cretins may use it to try and hunt thylacines (or to try & claim a bogus reward). I say it is naive to think the species is not already subject to hunting. Secrecy and apathy are the real threats. The time has come to bring all information out into the open, and recognise this species exists before it becomes extinct; which it will if changes are not made.

Thylacine field advice offered in this book is far more detailed, more comprehensive, and more accurate than has ever been available before. Now there is no excuse for the Tasmanian government or anybody else, to not take the matter seriously.

A) Search difficulties.

The 21st century searcher is at considerable disadvantage when trying to locate or film thylacines. During bounty times the animals were more abundant, and therefore easier to find, but hunters of that time were also unrestricted by concern for the thylacine, or for any other native animal; the more killed the merrier.

Capture methods used in the past are totally impractical today because of the very high numbers of other animals which get in the way and render the strategies useless - populations of other native animals were greatly reduced during bounty times due to relentless trapping and poisoning.

Current very high numbers of Tasmanian devils thwart any attempt to catch or film thylacines. Bait is stolen or mangled, camera gear & cages tripped or damaged. Rare thylacine footprints are never clear, and easily confused with devil or wombat prints. Trying to identify thylacine scat from thousands of devil scat samples is a daunting task like all others.

Tasmanian devils were pushed close to extinction as a result of poisoning until the 1960's, so dead animals often lay in the bush for days. However now the extremely high devil numbers mean carcasses of dead animals are almost always completely eaten overnight; if a thylacine happened to die in the bush, there is effectively no chance of a searcher finding the body. Likewise one of the few indicators of thylacine presence, kill pattern, is now rendered mostly useless.

Finally the current attitude of the thylacine is now far more alert and intent on avoiding humans than it ever has been in the past; harnessing its formidable ability to endure through the ages and avoid contact at all cost. Since virtual extinction during the early 1900's the thylacine species has reinvented its behaviour as a matter of raw survival. Specific elements of past behaviour are known from trappers' comment and other historical sources, however none of this need now apply, and present day searchers rely on past records to their frustration.

Foot odour, body odour, soap perfume and cigarette smell on smokers are strong, fundamental human scent markers; hence a wary tiger's ability to avoid thousands of snares, cameras and traps - every one surrounded by those markers. The smell of dogs is also usually attached to human hands or clothing. Even filling the car with fuel on the way to the work area leaves long lasting oil residues on hands and shoes.

Natural food is now so abundant that thylacines are rarely hungry, and not tempted by any form of bait. They sometimes approach strange things out of curiosity, but are extremely nervous and suspicious when doing so; the slightest hint of human and they are usually gone never to return.

B) Difficulty of finding footprints.

Looking for thylacine footprints must surely be one of the most tormenting and fruitless pursuits available, particularly if the searcher has never seen a thylacine, and the rest of the world is saying it is extinct. The author spent four years searching for thylacines before actually seeing them - during that time the only motivation to fall back on was a raw desire to see a living Tasmanian tiger, and to ultimately try & help recover the species. If money or notoriety was the motivation I would have given up long before; there are a lot of easier ways to make money than this.

Finding thylacine footprints is extremely difficult for a number of reasons, listed below in order of importance.

1) No detailed description of footprints available.

There have apparently been few plaster casts of thylacine footprints made in the past, and no detailed descriptions or images in the literature – of either prints on the ground or plaster casts. The best if not the only print description was found in Guiler (p.52), certainly the starting point for any search, however I have found this to be limited, and misleading in some ways.

2) Similarity of other species.

Looking for wild dog prints in the Australian bush is quite simple because dogs are an introduced animal with effectively no similar species to confuse the identity of footprints. However in the marsupial world of Tasmania there are at least three species whose footprints are quite similar and can at times all appear to have been made by the same animal. These are the common wombat, the Tasmanian devil, and the thylacine. Wombats and devils occur in all habitats throughout Tasmania, and are both very numerous, so their prints can appear in any bush setting. When these animals walk in different ways, and/or through different substrates, each can produce footprints which appear exactly the same as what Guiler says thylacine prints should look like.

In the early days I was repeatedly tormented by unmistakable thylacine prints which were later realised to be created by other species, or even by a combination of other species, such as wombats stepping on top of wallaby prints. The process of learning to differentiate thylacine prints, and to understand the myriad combinations of substrate, weather, species, behaviour, size of the animal etc. etc. is such a see-saw of highs and lows as to truly and seriously invite a nervous breakdown.

3) Thylacines don't walk in mud.

As the heading says, thylacines choose not to walk in mud. They appear to purposely spring over soft or muddy patches, and seem to be generally very picky about where they put their feet.

4) Thylacine prints are never clear.

A thylacine has very flexible feet. This means the toes and pads move with the substrate, and generally do not leave a clear or "standard" impression.

Shape of the feet changes when the animal is walking or running. Joints in the feet of dogs are quite stiff in comparison, and dog feet are webbed to hold the toes together, so dog prints are relatively similar no matter what they step on or how they walk. This flexibility makes a thylacine more dexterous with its feet than a dog (probably at the expense of top speed), but it also makes footprints a lot harder to identify. I have cast hundreds of probable thylacine footprints, but none of them are perfectly clear.

5) Thick bush and bad weather.

Tasmanian tigers now usually live in thickly vegetated places, which means the ground is covered with sticks and leaves. The weather in places where most thylacines live is also generally bad (that is why humans don't live there); wet/thick forests or exposed, rocky, windy mountain tops. It is either windy or raining most of the time; wind and rain both distort prints. On the western half of the island there is rarely more than a week of stable weather for a good number of animal prints to collect on the ground. Regular cold fronts during winter mean the weather normally cycles from good to bad, so clear prints of any animal rarely last on the ground longer than a few days.

6) Rarity

Of course if there are thousands of other animals moving through an area and only one finicky thylacine, then trying to find a tiger print in good substrate with no sticks or leaves, and recognise it from all the other prints, and get to the print before some other animal steps on it, before it rains, or becomes windy - is all not a pastime which brings quick reward.

7) Ridicule

There is one other reason why looking for thylacine prints is difficult. This is the direct or indirect ridicule that all tiger searchers are subject to. Academic comment is that the Tasmanian tiger is extinct, and as a result the general public is lead to believe the same.

Tiger searchers have been openly patronised by museum curators or other people in socalled authority (documentary video). Wasting time and money to wander around looking for Tasmanian tiger footprints is not easy to explain to passers by; even harder to sustain for the years necessary to begin to recognise the prints.

Footprints are the best tool a tiger searcher has to work with. Then with the above factors 1-7 in mind, is it any wonder evidence of thylacines is hard to find? The subtle difficulties of searching for Tasmanian tiger footprints exemplify the difficulty of searching for the species in general. This is the most elusive animal in the world for many reasons; some due to the nature of the animal itself, but others to complications associated with the places where it lives. Academics and novice searchers do not realise how effectively these additional factors can hamper thylacine field work.

C)Footprint diagrams.

Below are the author's own summaries of outline footprint targets and other related diagrams. The diagrams shown are not perfect, but they will be of assistance to anybody seeking to understand thylacine prints.

It is first necessary to cast a wide range of prints from all similarly sized animal species in the chosen work area. Casts of common animal footprints are often different from what people expect, and there is enormous temptation to believe something is tiger evidence when it is not. Some people have shown me dog print casts, believing in all certainty they were made by a thylacine. In fact if they had first cast a good range of prints from their own dog for comparison, then the true species identity of their casts would have been quite obvious.

You should remember that print work is never as simple as casting a print, then comparing it with recommended trace patterns for various species. In all cases the way prints are laid out on the ground is at least as important as the casts themselves. Some prints can look 100 percent like Tasmanian tiger, but others in the series show the animal was definitely not a thylacine.

Having said that, print outlines are useful, and I suggest you use the technique mentioned in Chapter 1, whereby a piece of transparent plastic film (part of a normal plastic shopping bag) is placed over the print cast or photograph, and a tracing made of the print outlines with a black felt pen. That tracing can then be laid over the outlines shown in Plate 50 below for comparison. An attempt has been made to keep all the print diagrams close to relative size.

Use of Plate 50:

A basic scale of all the prints in Plate 50 can be obtained if trace A in any reprint has a total width of 50mm. Of course the actual size of the field print depends on size of the animal.

Dog: A) front, B) back (left and right effectively the same) - should rarely be cause for confusion with thylacine; easy to identify.

Fox: C) front, D) back (left and right effectively the same) - can be confused with dog or cat, but not at all like thylacine.

Cat: E) front, F) back (left and right effectively the same) - prints usually clear and standard, often with claws showing, large cat prints can be confused with fox.

Tasmanian devil: G) front left, H) back left - fifth toe (thumb) on front foot is not always showing. Fifth toe can also be pushed up by substrate to look like thylacine. Devil front and rear prints can appear exactly the same as some juvenile thylacine print variations. Back foot pad is the main difference, but the back pad of thylacine prints can also look like H depending on how they walk. Front footprint can be confused with juvenile tiger back foot.

Patterns G and H are quite different from the Tasmanian devil tracings offered by Guiler (p.52). Prints from this species change greatly depending on how they walk, what they step on etc. There is also a slight difference between prints from west coast and east coast devils. Devil tracing suggestions shown in Plate 50 are the extreme variant which could most easily be confused with thylacine prints.

Wombat: I) back left, J) front left – Prints usually clear and standard, front foot sometimes without fifth toe showing. Wombats like to walk in mud, and generally shuffle around without direction. The rear print is often placed on top of front. The rear print should never be confused with thylacine, however the front foot is a constant problem; a) in hard mud only the claws show, which can be confused with the front foot of a thylacine, b) sometimes in mud the front pad can twist in relation to the toes, making the front print appear like a thylacine back print, c) sometimes the bottom lobe of the front foot does not show in the print, which makes the front foot a ppear like the front foot of a thylacine - see K)...

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Juvenile thylacine:

Juvenile thylacines can leave prints which appear exactly the same as some Tasmanian devil print variants. Better impressions show a larger gulf in the bottom centre of the front pad, as well as two grooves moving away from the gulf. The rear pad of juvenile thylacines is more rounded than the back pad of a devil, but not necessarily; the thylacine back pad is flexible, and the rear part of it can rise up to leave the same basic impression as the rectangular back pad of a devil (usually only in soft sand). The best print tracing to use for a juvenile thylacine is Guiler (p.52) (shown in Plate 36; Chapter 1).

Beside is a scanned image of two of the author's probable juvenile thylacine casts. These are two of 100 or so from the same series; cast 29/11/02. Left is the front foot, right is the back foot. Both impressions were made by the right side feet.

Plate 51. Casts of probable juvenile thylacine footprints.

These were found in the same location as the sightings mentioned in Chapter 5.

Plate 52 beside shows the same casts under the traces of Guiler (p.52). Note the back footprint cast does not line up perfectly; again the pads and toes are very flexible, so prints are rarely standard. My back footprint casts normally show а depression where the arrow is pointing, which is not mentioned by Guiler.





Plate 52. Comparison with traces from Guiler p.52.

Adult thylacine: Below is the author's suggested target print pattern of an adult male thylacine (female prints are usually the same only smaller). The intended scale is obtained if the length of the hock impression in any reprint is 95mm. The actual heel is longer than 95mm, but that is the length which appears in the prints, unless the bed is very soft. Again this hock length depends on the size of the animal, how it walks, what it steps in etc.



Plate 53. Suggested tracings for an adult male thylacine

There is no standard adult pattern; Plate 53 shows a generalized target. The back foot is more likely to be identifiable than the front. Some reports say the back hock rarely touches the ground, however most of my thylacine back footprints have part, or all of the hock present (perhaps that is why I was able to identify them). Presence of the back hock is difficult to confuse with other species, though that can happen if a wombat steps on top of a wallaby print, or some other animal print slides in such a way as to suggest an extended heel. An impression of the back hock is often left when a thylacine is running, but in those cases the rest of the print is distorted due to general flexibility of the pad and toes.

The main pads of thylacine feet become larger in relation to size of the toes as the animal grows from juvenile to adult. When the rear hock is on the ground the associated back foot pad becomes compressed from front to back, more is added to the bottom of the pad impression beside the hock, and the fronts of the toes are pulled upward, so the nails normally do not leave impressions. In this case the print resembles an ice-cream cone; see trace N in Plate 53.

Below are author's representations of the underside of thylacine feet.





Plate 54. Representations of thylacine feet from below

Hair moves across the rear heel pad in two places as shown, which is sometimes visible in the print as disrupted areas. Pads and toes are all finely granulated. Nails are triangular; sharper and more hollow on the back than the front feet. The V-shaped patch of naked skin behind the front pad extends up to the wrist lobe.

Below is a further analysis of thylacine feet; A) left front, B) Right rear. These diagrams, and the ones above can be used to help understand the feet, and hence the many footprint variations. Hair on the toes extends past the nails, especially on the back feet, but this has been cropped in the diagrams.



Plates 55 & 56. More representations of thylacine feet

No attempt has been made here to show the layout of prints on the ground because there are too many combinations of walking style, substrate and motivation. However below are common relationships between front and back feet of both devil and juvenile thylacine; when both animals are moving with a slow loping run. Front left and rear right land together as shown.



Plate 57. Suggested layout of thylacine & devil prints

Footprints are by far the best tool a searcher has to not only establish the identity of an animal, but where it was going, what it was doing, if the same one appears to be staying in the area, if there are more then one, if there is any repetitive behaviour etc. Other search tools are mentioned below, but finding these in a certain area will mostly only provide motivation to look for footprints.

As a side note, footprint advice offered here is far more detailed than has ever been published before, derived entirely from my own field work which began in 1998. I have not received assistance from anybody (besides a literature review). I have not seen any prints cast by other people, and there have previously been no useful images of either footprints, plaster casts or thylacine feet in the literature. So how did I get this information if the species is extinct?

D) Other search tools

1) Kill Pattern.

This was described in Chapters 1 and 4. Again this provides a point of interest; an indication at best that a thylacine may have been there. Little other evidence can be gained, and since finding tiger kill pattern is very rare, then this tool is of limited value. Searchers could try to take swabs of saliva from the attack sites if they think that will achieve anything.

2) Scat samples.

Recognisable thylacine scat is most likely to be large (>25mm diameter), black and greasy, with fine, short whitish hairs inside, and not much bone. The scat usually breaks into segments about 3 inches long. The problem here is that Tasmanian devils can produce a surprisingly large scat, which can sometimes also have all the characteristics mentioned above. Poking hundreds of scats wears thin after a while, particularly when you know full well virtually all were left by devils. Hair samples from convincing scats, may be useful for DNA testing.

3) Lair nests.

Thylacines make nests of grass, ferns and chewed wood in the back of caves, however both wombats and Tasmanian devils do this also. Look for very large depressions in sand which are lined with grass, ferns/chewed wood, or large collections of vegetation in open cave chambers. Wombats and devils generally make nests in tight places, not open chambers. Large bones and large black greasy scats are always associated with thylacine nests.

Here again a convincing lair nest cannot say more than that a thylacine may have been there. You can look for hair samples in the nests, or you can take my advice and not bother with that. By one process or another it seems every Tasmanian mammal leaves their hair in these nests. Trying to decide what is thylacine hair is a mentally disturbing task, and even if a good hair sample is obtained, the true usefulness of that is questionable.

4) Thylacine noises.

Tasmanian tigers can make a range of noises as described by other authors, and so people sometimes hope that if they listen intently on a quiet night they may hear thylacines calling. The most common noise people believe to be thylacine is a yip-yipping sound the animal apparently makes when hunting; people hear this kind of noise in a remote area and think it must be a hunting Tasmanian tiger. I have listened intently on more quiet nights than I care to remember, in areas where I know thylacines live, but I have not heard any sounds attributable to them. I have heard yip-yipping noises in other places which always turned out to be dogs.

There was only one occasion when I heard a noise I believe to have been made by a thylacine. This happened when I was climbing through thick vegetation down a long slope approaching a cleared area. When I emerged into the clearing an animal in the bush on the other side of the clearing made a coughing noise as it ran away through the scrub. It was a large, fast animal which moved through the bush like a quadruped (not hopping like a wallaby). The animal apparently came to investigate what it was that was making all the commotion coming down the slope.

The noise itself is described as an extended, uneven cough of descending tone, broken in two places (three syllables), with a total duration of two seconds. It was quite loud, and fits the literature description of a thylacine alarm vocalization.

5) Spotlight eye shine

After a while you get to know each species by its eye shine, and after a long while there is no mistake anymore - you don't need to see the animal to know which species it is. Each type of animal has its own eye shine colour, but also its own behaviour. Often the behaviour of the animal as it runs away is a stronger indication of its identity than the colour or size of the eye shine itself.

Deer and pig: eye shine is blue/green (they run in a constant motion without looking back). Dogs: green (blink a few times then walk away). Cats: bright white (blink once then dart for cover, stop suddenly to look back). Sheep, goats and cows: pale green/white (stupid stare then look down). Wallabies: small and red/orange (look then turn away). Devils and wombats: very small red (run away without looking back). Possums: small and bright orange (eyes bifocal, close together, long stare then turn away). Thylacine: giant bright orange/yellow, perfectly round (eye shine bounces with the loping run, look back several times while running with the bifocal eyes of a hunter. Often skid, turn and run back the other way).

E) Using bait to lure thylacines.

Here is an interesting subject, and one which I could write another book about. My advice to any searcher is "forget about using bait to lure thylacines". I have spent years trying to lure thylacines to automatic cameras with every conceivable kind of bait, at any expense, and apart from Plates 41 and 42 there has been no evidence that any of it worked. The subject of Plates 41 and 42 was an isolated incident; so isolated that it is simply not worth using bait to lure thylacines.

The idea that a carnivorous animal cannot be lured by bait, does not step in mud, has reinvented its behaviour; all seems preposterous, and it torments the mind. Yet this is the reality searchers face, and these are the reasons why nobody has been able to prove the thylacine exists for 70 years. As I have said before, this is the most elusive animal in the world, and yet it is true that authorities and the general public have been too quick to give up on the Tasmanian tiger; too quick to compromise its habitat.