

# Introduction

Chapter 1

SCIENCE AND THE SPECIES FROM A EUROPEAN PERSPECTIVE

Species finally depart the biota, not with a bang but a whimper. The thylacine, 1  
Tasmanian tiger or marsupial wolf, *Thylacinus cynocephalus*, is one of a handful of  
species where that whimper has a precise date. The thylacine became extinct on  
7 September 1936 when the last known specimen died in captivity in the  
Beaumaris Zoo, Hobart.

This book summarises and interposes the known biology and behaviour of  
the species with its recent history and the contingent events that led to its  
extinction. Necessarily, it concentrates upon the recent historical records of the  
thylacine in Tasmania, but prior to the repeated human invasions of Australia  
the marsupial wolf was widespread in distribution. It was found throughout the  
one continental landmass, from New Guinea in the north to Tasmania in the  
south, hence the factors involved in the mainland extermination of the species  
need to be considered in order to understand how the final extinction process  
came about.

In constructing a narrative of the thylacine I have focussed primarily upon  
changing scientific perceptions of the thylacine’s predatory behaviour. Within  
Tasmania I consider how human–thylacine interactions were constructed in a  
social, political and cultural context; and how these imperialistic constructions  
became incorporated into the changing face of Australian colonial science,  
coming to represent the accepted body of knowledge on the species. These  
constructions and their results (for example, a government bounty scheme)  
were more than adequate to drive the species to extinction, unaffected by the  
widespread growth of environmental concerns evident in Tasmania in the  
nineteenth century and throughout Australia in the early twentieth century.

As a dynamic and creative intellectual exercise, scientific constructions never  
stand still. Nevertheless, it might be expected that the extinction of a species  
would be associated with some stability of scientific knowledge construction. This

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expectation, however, does not appear to hold for the thylacine. With human–thylacine constructions and interactions so patently involved in the deliberate extinction of the species – ‘bangs’ very much preceded the whimper – it is, perhaps, not surprising to find a shifting of emphasis, interpretation and responsibility apparent in both popular and scientific constructions of the animal after its extinction. While these changes are explicable in terms of the typical behaviour of the human species, their ‘naturalness’ nevertheless strikes at the heart of scientific endeavour, which ideally attempts to construct an objective developmental history and analysis of the observable world.

This chapter briefly introduces the species from a European perspective, covering its recent discovery and classification, and reflecting on the methodology used in data construction and the operation of science in colonial cultures.

A nineteenth-century classification

2 Tasmania (formerly known as Van Diemen’s Land) is an island state of some 68 300 square kilometres – a little smaller than Ireland – that represents the southernmost part of the Australian continent, from which it is now separated by the relatively shallow Bass Strait, established by rising sea levels about 12 000 years ago. It has been affectionately called ‘The Apple Isle’, reflecting both the rough outline of its shape, and one of its best-known agricultural exports. Lying between 40° and 43½° south of the equator, it has much in common with similarly placed – and mountained – latitudes in the northern hemisphere, such as northern California and north-west Spain.

The mountains of western Tasmania are weathered ranges of pre-Cambrian quartz metamorphics and conglomerates. Although rarely exceeding 1500 metres they are rugged and covered with cool temperate rainforest, descending to high rainfall sedgeland near the coast. The centre, east and south-east of Tasmania consists of the central plateau (over 700 metres above sea level) based on horizontal Permian and Triassic sediments. Prior to European colonisation, the central plateau was dominated by sclerophyll woodland. Both the western mountains and the central plateau contain thousands of lakes, the majority of which are glacial in origin. To the east of the central plateau, essentially running between Launceston and Hobart, lie the Midland Plains, based on Triassic sediments, and consisting of open grassland with sclerophyll forest remnants. The peaks of the Devonian mountains in the north-east are covered by rainforest, descending to sclerophyll forest at the coast. Coastal plains around the island are limited, usually restricted to only a few hundred metres in width (Davies, 1965; Guiler, 1985). In the highlands snow may fall at any time of the year, but peak falls occur in late winter and spring. Maximum temperatures in the island are experienced in the low-lying areas of the Midland Plains in the east and south-east and on the coastal plains, where daily summer temperatures may rise to over 100°F (37.8°C).

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European contact with thylacines possibly dates from the seventeenth century. Abel Tasman sighted Tasmania on 24 November 1642 and named it Anthony Van Diemens Land. An on-shore investigation was carried out by Pilot-Major Francoys Jacobsz on 2 December: ‘They saw the footing of wild beasts having claws like a *Tyger*’ (Rembrantse, 1682, p. 180). Given the dubious nature of post-1936 claims of thylacine footprints, the possibility of footprint misidentification needs to be entertained. Apart from its date, however, this record is not unique. Analysis of the archives of the Dutch East India Company in Australian waters has identified additional records of ‘tyger’ footprints and also ‘tyger’ sightings in the seventeenth and eighteenth centuries: Heuvelmans (1958); Lang (*ca* 1910); Moeller (1990, 1970); Whitley (1970).

Eighteenth-century French expeditions to Tasmania also apparently met with thylacines. du Fresne, in the *Mascarin*, arrived in Tasmania in March 1772, and met with a ‘tiger cat’ (Roth, 1891). La Billardière was naturalist aboard *La Recherche* on the expedition captained by D’Entrecasteaux, that visited Tasmania in April and May 1792. While collecting ashore, he ‘found . . . the upper jaw-bone of a large animal of the carnivorous tribe’ and ‘heard the cry of a beast of prey’ (Labillardière, 1800, p. 114), indicating contact with either a thylacine, Tasmanian devil or spotted-tailed quoll. Specific contact with a thylacine is now known to have taken place on 13 May 1792. The English translation has been confusing, referring to an encounter with ‘a beast of prey . . . a quadruped the size of a large dog . . . of a white colour spotted with black’ (1800, pp. 118–19). As the basic background colour of many thylacines was a light pale brown or grey, the ‘white colour’ presents no problem, but ‘spotted with black’ is a decidedly unhelpful description of a thylacine’s stripes. However, Neil Murray (personal communication) has returned to the original French publication of La Billardière’s journal, and suggests that the translation of the phrase *tacheté de noir* (La Billardière, 1799, p. 163) in this context, should more appropriately be rendered as ‘marked’ or ‘streaked’ with black.<sup>1</sup>

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It was not until the early nineteenth century that the thylacine was first described scientifically. Tasmania’s Lieutenant-Governor Paterson sent a detailed description of the marsupial wolf to Sydney for publication in the *Sydney Gazette and New South Wales Advertiser* (21 April 1805). The species was officially described and named (*Didelphis cynocephala*) by Tasmania’s Deputy Surveyor-General George Harris. He sent ‘drawings & descriptions from the life, of two Animals of the genus *Didelphis*’ (31 August 1806) to Sir Joseph Banks, who read Harris’ description of the thylacine (and Tasmanian devil) before the Linnean Society on 21/4/1807, prior to publication in 1808:

The length of this animal from the tip of the nose to the end of the tail is 5 feet 10 inches, of which the tail is about 2 feet. . . . Head very large, bearing a near resemblance to the wolf or hyæna. Eyes large and full, black, with a nictant membrane, which gives the animal a savage and malicious appearance. . . . Tail much compressed, and tapering to a point . . . Scrotum pendulous, but partly concealed in a small cavity or pouch in the abdomen.

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The whole animal is covered with short smooth hair of a dusky yellowish brown . . . On the hind part of the back and rump are 16 jet-black transverse stripes, broadest on the back, and gradually tapering downwards . . .

Only two specimens (both males) have yet been taken. It inhabits amongst caverns and rocks in the deep and almost impenetrable glens in the neighbourhood of the highest mountainous parts of Van Diemen's Land, where it probably preys on the brush Kangaroo, and various small animals that abound in those places. (Harris, 1808, pp. 174–5)

The basic background dorsal colour varied between specimens from an intense deep brown (Gould, 1851) to a sandy colour (L. R. Green, *ca* 1975), with softer, more washed-out coats described as varying from pale brown (Waterhouse, 1841), to greyish brown (Lydekker, 1894) to grey (Gunn, 1838x). Variation was also shown in the contrasting stripes, described in selected specimens as black (Gould, 1851), brown-black (Thomas, 1888), dark brown (Dransfield, 25/8/1981) or darker grey (Gunn, 1838x) or darker sandy colour (L. R. Green, *ca* 1975). Colbron-Pearse (1968) recalled a captive specimen in which the banding itself was not uniform, but changed from dark to light brown.

4 Selected vital dimensions from over forty different live, or recently killed, specimens of marsupial wolf are known, considered here in the British Imperial units in which they were originally expressed. Specimens with nose-to-tail lengths of less than 4 feet (121.9 cm) are defined as juvenile specimens, following Cunningham (1882). However, it could take some considerable time to achieve even this length in captivity. The male thylacine that died at London Zoo on 25 September 1853 had been caught in Tasmania in November 1849 (Gunn, 1850w). After four years in captivity, on its death it still measured only 4 ft 1/2 in (Crisp, 1855). While this may be a straight-line measure, rather than an along-the-body measure, the difference in the two measures for a specimen of this size would only amount to 6 inches (Waterhouse, 1841, 1846). Either way, it was still only a moderately sized specimen. A slight, but noticeable sexual dimorphism was present in the species, with adult males having a slightly longer body length than females (Gunn, 1852w; Ride, 1964). Removing the juvenile specimens from the sample suggests that the average direct length, nose-to-tail, of adult male thylacines, was around 5 ft 4 in (162.6 cm), and for females, 5 ft 1/2 in (153.7 cm), with along-the-body measures for specimens this size likely to give readings 7 1/2 to 8 inches (19.1–20.3 cm) longer. Adult specimens up to 6 ft 6 in, probably measured along the curve of the body, were not uncommon (*Hobart Town Gazette*, 5 April 1817; Lord and Scott, 1924; Meredith, 1852; Paterson, 1805; *Tasmanian*, 16 September 1871) and no doubt the occasional specimen was even larger. However, Oscar's (1882) description of a freshly killed 8-foot specimen was merely an estimate of body size. It was obviously a large and impressive specimen, but it was not accurately measured.

Specifically measured weights of adult specimens have been provided by Paterson (1805), Gunn (1838x) and *Launceston Examiner* (14 March 1868). In addition, after the arrival of three adult thylacines at Melbourne Zoo in 1874 and 1875, the Secretary of the Gardens, A. A. C. Le Souëf provided an adult

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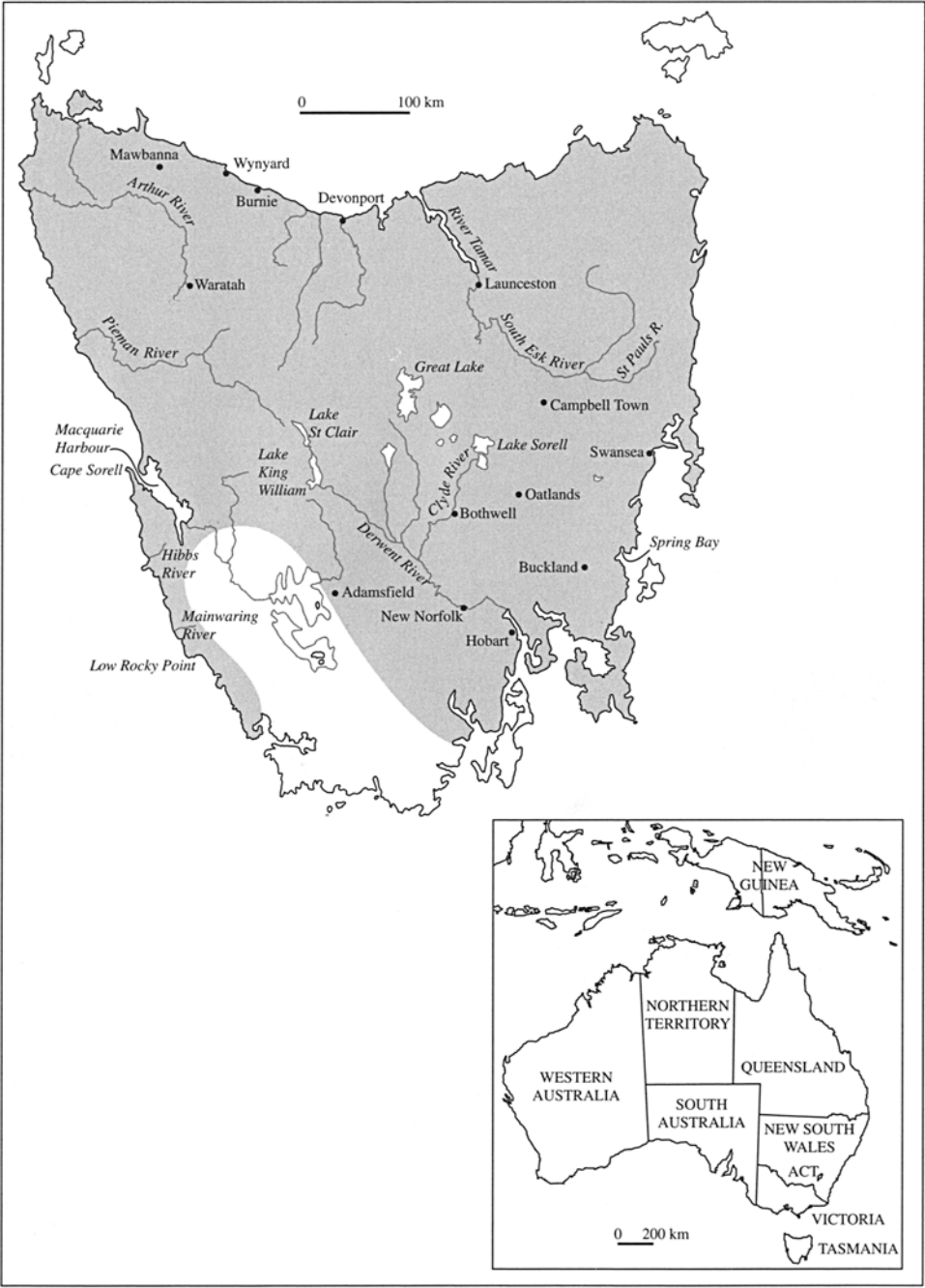
weight range of 60 to 70 lb (Commissioners of the Victorian Intercolonial Exhibition, 1875). The above measures suggest the average weight of an adult thylacine was about 65 lb (29.5 kg).

The ‘tyger’ was well known from the earliest days of colonial settlement (Knopwood: 20 August 1803, 18 June 1805; Paterson, 1805) before its official scientific description. It was acknowledged as rare and uncommon, and to retreat from the areas of settlement and land alienation (Oxley, 1810). In terms of distribution it was only ever considered to be locally common in the north-west (Gray, 1841; Gunn, 1838w) – principally in response to the claims of significant sheep predation emanating from the Van Diemen’s Land Company. Gunn (1852x, p. 80) considered: ‘This animal is found all over the island, from the sea coast to the summits of the mountains’, but the suggested distribution of the thylacine into the dense rainforest and sedgeland of south-western and southern Tasmania is now known to have been incorrect (Guiler, 1991). The thylacine was described as common along the west coast and inland, down to Macquarie Harbour (Robinson, 29/9/1830). For south-western Tasmania, there are only occasional nineteenth-century and early twentieth-century records: from Cape Sorell lighthouse keepers in 1932 (Williams, 10/9/1981); ferry and hut builders at the mouth of the Hibbs River in 1914 (Slebin, 22/4/1937); and survivors of the shipwrecks of the *Acacia* in 1905 at Mainwaring Inlet (Guiler, 1985), and the *Moyne* at Low Rocky Point in 1867 (Mollison, 25/11/1951). These records reflect the species’ attraction for the coastal environment, not the denser sedgeland and rainforest of the south-western and southern mountains (see Map 1.1).

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In Harris’ original description (1808), reflecting the practice in British scientific circles, the thylacine was placed in the genus *Didelphis*, originally created by Linnaeus for American opossums. Harris’ summarised description of the species was presented in Latin – ‘*Didelphis fusco-flavescens supra postice nigro-fasciata, caudâ compressâ subtus lateribusque nudâ*’ (p. 174) – and with the Latin term *cynocephala* translated as dog-headed, the original nomination of the marsupial wolf described it as the ‘dog-headed opossum’. Amongst continental scientists it was early recognised that Australian marsupials were significantly different from their American cousins, and from the 1790s onwards Geoffroy Saint-Hilaire, Lacépède, Temminck and de Blainville between themselves – Shaw and *Macropus* excepted – established the basic genera and classification scheme against which all Australian marsupial species are referred to this day. It was some considerable time before British scientists reluctantly accepted the necessity of using this intrusive continental classification into what they saw as their own colonial scientific domain. Geoffroy Saint-Hilaire established the genus *Dasyurus* for Australian marsupi-carnivores in 1796, into which he placed the thylacine (1810). The Tasmanian tiger was finally separated into its own genus *Thylacinus* by Temminck (1824). As the mixing of Latin and Greek roots in scientific nomenclature was (and still is) considered extremely poor taxonomic form, once the marsupial wolf was placed in the Greek-rooted genus of *Dasyurus* there was a necessity to alter its specific name from the Latin-based *cynocephala* to the Greek-based *cynocephalus* (Geoffroy Saint-Hilaire, 1810).

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Map 1.1 The location of Tasmania and probable recent range of the thylacine.



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Twentieth-century designations

The most common translation of meaning for the genus *Thylacinus* is ‘pouched-dog’ (Strahan, 1981). This has given rise to a certain redundancy in translating the marsupial wolf’s scientific name as ‘the dog-headed pouched-dog’ (Aflalo, 1896; Moeller, 1990; W, 1855). Its very obviousness is inelegant, and borders upon the stupid and crass. In common with the rest of humanity, scientists as a whole do not appreciate impositions of crassness and stupidity, particularly when they emanate from within their own boundaries. It is possibly for this reason alone that it became increasingly fashionable, throughout the twentieth century, to strangely render the translation of *cynocephalus* as ‘wolf-headed’, despite there being no lupine reference within the specific name. While blatantly incorrect, the suggested translation of the marsupial wolf’s name as ‘the pouched dog with a wolf-like head’ (Lydekker, 1915, p. 216) is free from redundancy, inelegance and stupidity, and thus became the favoured translation in the scientific literature of the twentieth century. The problem of redundancy in translation, however, actually lies with the incorrect translation of *Thylacinus* rather than *cynocephalus*. As Malcolm Smith (16/9/1972) and Gotch (1979) have pointed out, Temminck constructed the genus *Thylacinus* from the single Greek word ‘thylakos’ (θυλακος), meaning a leather pouch. Hence the literal translation of the marsupial wolf’s name reads as ‘the pouched thing with a dog head’. Only a few twentieth-century scientists have swum against the majority ‘wolf’s head’ tide: R. Brown (1973); Guiler (1958x); Hickman (1955); Sayles (1980); and M. Smith (1982).

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The marsupial wolf is currently taxonomically placed in the Family Thylacinidae, which has a 24 000 000-year history behind it (Muirhead and Wroe, 1998). Queensland and Northern Territory deposits have produced five additional genera (*Badjcinus*, *Muribacinus*, *Ngamalacinus*, *Nimbacinus* and *Wabulacinus*), and within the genus *Thylacinus* there are currently recognised five extinct sister species to *T. cynocephalus*.

Having briefly considered the description and initial classification of the marsupial wolf, an additional word is required on the nomination and nomenclature used in this text. Considerable pressure is being exerted, certainly in an Australian context, to no longer colloquially refer to the two largest Australian mammalian groups as marsupials and placentals. Admittedly, the distinction between these two different reproductive types cannot be made on the simple possession or absence of a placenta. A placenta is an organ of easy operational definition that can be demonstrated, through observation, analysis and measurement, to occur in all marsupials as well as in all placentals (and in the numerous live-bearing reptiles as well). It is, therefore, inaccurate and imprecise to differentiate one mammal type with a label referring to an easily defined and measured organ that is possessed by both mammal types. Hence, there is a move to change the common nomenclature of marsupial and placental away from the incorrectly implied placental versus non-placental possession, in favour of a return to the old Huxleyan labels of eutheria, for placentals; and metatheria, for

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marsupials. Unfortunately, these words carry significant cultural connotations: eutherian relating to the true, well-formed beasts, the most highly developed mammals; while being metatherian infers only an attempted approximation to such a eutherian condition. Metatherians are supposedly located in a mid-way position, their live birth representing an advanced stage beyond that of the first egg-laying mammals (the prototheria), but the small birth size, and development within the marsupium, purportedly represents an earlier, serial stage in the evolution of mammals. Despite this cultural baggage of second-class citizenship, the advocacy of change to eutherian and metatherian has been trumpeted (Marshall Graves, Hope and Cooper, 1990, pp. 2–3).

8 The willingness of contemporary Australian scientists to accept a cultural labelling of the secondary and inferior status of marsupials, in order to preserve a purity of measurement in the operational definition of a reproductive organ, demonstrates an amazing lack of scientific sensitivity to the cultural values involved in such labelling and their reflection in the European treatment of Australian biodiversity. Historically, the perceptions of marsupial inferiority posited by progressive evolutionists were powerful and significant arguments, allowing scientists to justify the inevitability of extinction for the Tasmanian tiger and other indigenous species, and, arguably, these false perceptions still limit scientific research on Australian marsupials, and influence public perceptions of their status, to the present day. Richard Owen was largely responsible for defining the terms Marsupialia and Placentalia – as representatives of equal archetypes – and I purposefully use the words marsupial and placental throughout this text, hoping to see the anachronistic labels of eutherian and metatherian fall rapidly into disfavour.

Methodology

Constructing a narrative of the thylacine involves comparing and contrasting different thylacine sources. There are ambiguities, silences, real omissions, pretended omissions and contradictions in the literature. Oral history, visual images and photographs exist beside the written word. In any consideration of the thylacine’s behaviour these realities need to be acknowledged, argued and explained.

Recent literature on the thylacine tends to construct an hierarchy of sources, with an emphasis favouring the use of the most recent, twentieth-century accounts and publications on the species. This is fairly traditional scientific behaviour: assuming, as knowledge increases with time and theories become refined, the more recent observations and publications will reflect this growth and change, and thus possess greater accuracy and validity over older-published observation and comment. For many objects of scientific analysis this appears a quite reasonable assumption. In so far as any object of scientific curiosity is capable of further observation and experimentation these orientations may well be justified.



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With a recently extinct animal, however, such orientation, assumptions and assignment of value towards source material are less easily justified. In the years prior to extinction, any species, but particularly a social species such as the thylacine, is likely to be operating under severe psychological stress. With the decimation of the species' population comes a disruption of the entire repertoire of social behaviour in the species. As a result of such stress, observations of behaviour on individual specimens in the last years of a species' existence are far more likely to report aspects of abnormal behaviour in inappropriate contexts and environments. Despite this, the operation of a selective categorisation of sources with an hierarchical preference for twentieth-century records is very much evident in the current scientific literature on the thylacine. Three examples are chosen to illustrate problems associated with this hierarchical categorisation.

Only one major scientific book has been published in English on the thylacine, Eric Guiler's (1985) *Thylacine: The tragedy of the Tasmanian tiger*. Its 207 pages represent the most detailed description of the species' anatomy and behaviour previously published, but it is unashamedly twentieth century in its orientation and perspective and contains less than sixty nineteenth-century source references on the species. At first I thought this was a genuine reflection of the scientific resources available. It is, after all, a commonly expressed opinion that nineteenth-century scientists showed little interest in the species. As I set out to consider the narrative of the thylacine in its scientific context I found this not to be the case (as a cursory examination of the reference material associated with this volume shows).

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The second example is more disturbing, for it shows a readiness amongst some recent authors to accept post-extinction 'sightings' and their associated accounts of the species' behaviour at face value as valid scientific data. I do not consider it to be a myopic retreat into naïve inductionism to demand a body before accepting any post-1936 account of the species. This principle has been an operative, methodological guideline throughout the writing of this text, which is based entirely on pre-1937 observations as sources for constructing the species' behaviour. This principle is not always apparent in the twentieth-century hierarchical organisation of the literature. The different types of lairs and dens in which thylacines lived are well described in the pre-extinction literature. No photograph of a genuine thylacine lair was known or published in the literature until my discovery of a 1902 photograph of a lair from which a thylacine was caught for Melbourne Zoo (Paddle, 1992). Nevertheless, prior to my publication at least three different photographs of supposed thylacine 'lair' were available in the scientific literature, all associated with unsubstantiated 'sightings' of the species post-1936 (Guiler, 1991; Park, 1986; *Science News*, 1966).

The third example of hierarchical source categorisation relates to modern scientific constructions of the social behaviour – or rather the absence of it – in the species. Unsurprisingly, most observations of adult thylacines in the twentieth century (hunting behaviours excepted) were restricted to that of lone, isolated individuals. By the time the twentieth century arrived, the thylacine had been

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persecuted and slaughtered in the state bounty scheme, commencing in 1888, as well as being the victim of an epidemic disease. The cessation of the bounty in 1909 left a handful of relict individuals in Tasmania, in a population under significant psychological stress that was heading rapidly towards extinction, and with the characteristic social behaviour of the species dramatically disrupted. The acceptance of an hierarchical categorisation of sources has resulted in the fashionable, twentieth-century scientific construction of the thylacine as a solitary animal and essentially asocial species (except for an adult female with young). It is even possible, with this social organisation in mind, to suggest that nineteenth-century accounts of the species are conformable with this viewpoint. From the suggestion that it ‘flies at the approach of man’ (Oxley, 1810) and ‘is scarcely heard of in the located districts’ (Widowson, 1829, p. 180) the thylacine in the nineteenth century was constructed as ‘solitary’, in the sense that it lived a retiring existence, remote from human society: ‘it is a solitary animal, and does not approach the thickly settled parts of the colony’ (Mudie, 1829, p. 176); see also Bischoff (1832); Ireland (1865); Lloyd (1862); Lycett (1824); Parker (1833) and Wentworth (1819). Modern constructions of thylacine social behaviour have, however, distorted the meaning of the word ‘solitary’ from its original nineteenth-century construction as referring to a ‘retiring species’, to an alternative reading, as if the word ‘solitary’ was indicative of an asocial species. This change in translated meaning appears to be almost entirely a twentieth-century phenomenon, one that runs counter to the commonly recorded nineteenth-century observations and descriptions of the species as primarily socially orientated, living (and hunting) in small family groups.

In terms of an hierarchy of sources, I have consistently favoured nineteenth-century over twentieth-century records of the species as likely to be more representative of the species’ behaviour.

This is not to suggest that all nineteenth-century accounts of the species are conformable, far from it. The politics of the production of knowledge on the species needs to be considered in the nineteenth century, particularly with respect to the species’ predatory behaviour. Most of those involved in agricultural enterprise in the growing colony had little affection for native Tasmanian flora or fauna, desiring to get rid of them as soon as possible, and replace them with imported, domesticated plants and animals. In dealing with the thylacine as Tasmania’s dominant, indigenous predator, there were significant and powerful interest groups in the community, outside the scientific sorority, with vested interests towards (or rather against) the species. While in the early European responses to the initial contact with the species there are no differences between scientific and popular constructions of the thylacine, over time a growing polarisation becomes evident in the nineteenth century between scientific constructions of the thylacine and the popular mythology of the species, fuelled by economically motivated considerations. While admitting a preference for scientific over economically motivated constructions, nevertheless, whenever possible, the polarisation of published sources on the species needs to be investigated by a consideration of the available unpublished sources.