

# A Catalogue of the Thylacine captured on film

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## ABSTRACT

The authors present a comprehensive catalogue of 112 known photographs of the Thylacine or Tasmanian tiger (*Thylacinus cynocephalus*), both from zoological collections and the small number of images that were taken in the wild. Throughout the literature, numerous inaccuracies relating to the provenance of the photographs have entered into publication. These errors often go unchallenged and are blindly replicated in subsequent publications as truths. The perpetuation of such errors can only frustrate or complicate future research effort into the species, hence the need for a reliable reference. This paper provides a summary of the work involved in developing the catalogue, together with a synopsis of the findings. The catalogue has been named the Thylacine Image Registry [TIR], and is published here for the first time.

**Key Words:** Thylacine, *Thylacinus cynocephalus*, photographic record, zoo.

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## Introduction

The photographic legacy of the Thylacine or Tasmanian tiger (*Thylacinus cynocephalus*) spans a total of 72 years (1864-1936). It is essentially a record of the species in captivity, as the only wild specimens captured on film were either dead, or photographed in the final moments before their expiration. Throughout the literature, numerous inaccuracies relating to the provenance of the photographs have entered into publication where they have been:

1. Erroneously dated: Paddle, 2012, p.84<sup>1</sup>; Lang, 2014, p.50<sup>1</sup>; Bailey, 2013, p.137<sup>1</sup>; Pask, 2014, p.160<sup>1</sup>; Fuller, 2013, p.171<sup>1</sup>; Moeller, 1997, p.79<sup>2</sup>; Smith, 1981, p.25<sup>3</sup> & p.27<sup>4</sup>; Whitley, 1973, pp.10-11<sup>5</sup>; Maynard & Gordon, 2014, p.80<sup>6</sup> & p.99<sup>7</sup>; Park, 1986, p.70<sup>8</sup>; Beresford & Bailey, 1981, pp.26-27<sup>9</sup>; Claude, 1996, pp.12-13<sup>10</sup> &

p.66<sup>11</sup>; Guiler, 1991, inside cover<sup>12</sup> & p.15<sup>13</sup>.

2. Assigned to the wrong zoo: Freeman, 2005, p.7<sup>14</sup>; Paddle, 2000, p. 58<sup>15</sup> & 87<sup>16</sup>; Guiler, 1991, p.4<sup>18</sup>; Guiler & Godard, 1998, p.51<sup>17</sup> & p.176<sup>18</sup>; Bailey, 2001, p.12<sup>19</sup>; Maynard & Gordon, 2014, p.99<sup>20</sup>; Lang, 2014, p.142<sup>21</sup>.

3. Incorrectly sexed: Guiler, 1991, p.3<sup>22</sup>; Paddle, 2000, pp. 198-199<sup>23</sup>; Edwards, 1996, p. 198<sup>22</sup>; Bailey, 2001, p.126<sup>22</sup>; Guiler & Godard, 1998, p.173<sup>23</sup> & p.174<sup>22</sup>;

11 Dates the Dando photograph [ZSL 10] from the London Zoo to 1910, rather than 1903.

12 Dates the photograph of the Woolnorth family group [MRB 5] to 1914, rather than 1910.

13 Dates the Penny kill photograph [WKL 4] to 1922, rather than 1924.

14 Argues that the Burrell chicken-eating series [MRB 24-28] was taken at Burrell's property (Manilla) in NSW, rather than at the Beaumaris Zoo.

15 Credits a photograph of a pouch-gravid female and her two enclosure companions [HBZ 19] to Adelaide Zoo, rather than to Hobart Zoo.

16 States that the Burrell chicken-eating series [MRB 24-28] was taken at James Harrison's property in Wynyard, rather than at the Beaumaris Zoo.

17 Credits a photograph of a resting male Thylacine [MRB 2] to City Park Zoo in Launceston, rather than to Beaumaris Zoo.

18 Credits the Sargent photograph of a young female [JHW 1] to Beaumaris Zoo, rather than to James Harrison's wild animal dealership in Wynyard.

19 Questions whether the Burrell chicken-eating series [MRB 24-28] was taken at the Healesville Sanctuary in Victoria (c1900), rather than at the Beaumaris Zoo in 1912.

20 Credits a photograph of the resting O'May Thylacine [MRB 2] as having been taken at Hobart Zoo, rather than at the Beaumaris Zoo.

21 Credits the photograph of a sleeping male Thylacine [MRB 2] to the Hobart Zoo (circa 1927-1929), rather than to Beaumaris Zoo (1916).

22 Sexed the adult and juvenile males photographed by Tucker at the Beaumaris Zoo [MRB 9] as being a male and female pair.

23 Sexed a photograph of the Kaine Thylacine [HBZ 23] as being female.

1 Dates the May 1936 Sheppard photograph of the Kaine Thylacine [HBZ 1] to 1928. Bailey (2013) dates to c1934.

2 Dates the photograph of the Woolnorth family group [MRB 4] to 1910, rather than 1909.

3 Dates the Penny kill photograph [WKL 4] to 1913, rather than 1924.

4 Dates the photograph of the Woolnorth family group [MRB 4] to c1920, rather than 1909.

5 Dates the photograph of the Kaine Thylacine with dog [HBZ 2] to 1928, rather than 1933.

6 Dates a photograph of the Kaine Thylacine [HBZ 6] to 1927-29, rather than 1933.

7 Dates a photograph of the O'May Thylacine [MRB 2] to 1927-1929, rather than 1916.

8 Dates the photograph of the Woolnorth family group [MRB 5] to the 1920s, rather than 1910.

9 Dates the photographs of the Woolnorth family group [MRB 4, 5] to June 1901.

10 Dates the Burrell chicken-eating series [MRB 24-28] to 1920, rather than 1912.

Owen, 2003, p.108<sup>22</sup>; Moeller, 1997, p.21<sup>22</sup>.

4. Questioned on whether they depict living zoo specimens or staged taxidermies: Freeman, 2005, pp.1-16<sup>24</sup>; Bailey, 2001, p.86<sup>25</sup>.

Even respected national institutions are not beyond reproach in recapitulating such errors. The Australian Museum website displays a photograph on its Thylacine page<sup>26</sup> that it states was taken by Harry Burrell at the Hobart Zoo in the 1930s. However, this photograph is the work of Frederick William Bond and was taken at the Regent's Park Zoo (London) in May 1913 (Appendix II, Image: ZSL 16).

Occasionally, the vague recollection of the photographer is responsible for initiating error. The National Archives of Australia has a photograph within its collection from the Beaumaris Zoo that it dates to November 1922 (NAA: A1861,7550). However, this designation cannot be correct, as it was the year after the zoo had officially closed and the last of its Thylacines, the Elliott male<sup>27</sup>, had died. *The Mercury* of the 16<sup>th</sup> October 1922 (p.6) records its demise:

*"Included in the animals in the Beaumaris Zoo presented by Miss Roberts to the City Council was a fine specimen of the marsupial wolf, or Tasmanian tiger, which was the pride of the collection. This tiger had been in splendid health and condition, but, unfortunately, contracted a chill during the recent spell of cold weather, and despite every effort of the Curator (Mr. Reid), who called in the assistance of a medical practitioner, it died last evening of pneumonia".*

The source of this dating anomaly can be traced to the filing of the original copyright application by Dr. Gordon Oxer on the 14<sup>th</sup> April 1958, in which he retrospectively dated the image to November 1922. In reality, Oxer's photograph of the large Tyenna male<sup>28</sup> walking in front of a trellis fence (Appendix II, Image: MRB 3), would have been taken at some point during its known period of display (12/8/1911-9/3/1915).

All too often, these numerous inaccuracies go unchecked or challenged and are blindly replicated in subsequent publications, press articles and on websites as truths. Undoubtedly, the perpetuation of such errors has the potential to frustrate or complicate contemporary research effort into the species. It is for this reason, that the decision was taken to catalogue all known photographic images of the Thylacine with the intent of producing a comprehensive and reliable reference for the purpose of encouraging and

facilitating future study and research. This catalogue has been named the Thylacine Image Registry [TIR].

## The Photographs (Sources)

At the time of publication, 112 photographic images of the Thylacine are known to exist<sup>29</sup>, preserved within a relatively small number of academic, institutional and private collections. This total was derived through an exhaustive search of the photographic archives of the major Australian, British, European and North American zoological societies and museums to identify any Thylacine photographs in their collections. In addition, an extensive review of published sources (books, journals, newspapers) was undertaken. These searches, together with the authors' knowledge of photographs held in private collections, enabled the total number of images to be determined. Inevitably, there will be other photographs, buried in family archives or misfiled in public collections, that remain to be discovered.

## The Earliest Images

The earliest known photograph of a living Thylacine (Appendix II, Image: ZSL 1) was taken in the summer of 1864 by Frank Haes, one of the early pioneers of animal photography, at the Regent's Park Zoo in London (Sleightholme, Campbell & Kitchener, 2016). The reluctant subject of Haes' photograph was a young male<sup>30</sup>, originally part of a family group, acquired for the zoo in 1863 by Ronald Campbell Gunn<sup>31</sup>. The only other surviving photograph of a Thylacine from the nineteenth century is a staged studio portrait of the Hobart chemist, William George Weaver and his kill from 1869 (Appendix II, Image: WKL 1). All other photographs listed within the TIR were taken between the years 1901 and 1936.

## A Challenging Subject

The Thylacine was never considered to be a compliant or easy subject to photograph. Haes (1865), in his efforts to obtain a photograph at the Regent's Park Zoo, states:

*"To obtain a good photograph of the Tasmanian wolf (or tiger), it was necessary to go into the enclosure: these animals are very savage, cowardly and treacherous; and a pretty dance they led us. The keeper at last despaired of ever getting one of them as we required; and in driving the animals about, one did his best to catch hold of my legs; however, we at least tired out one and fixed him on a plate, though the position is not all that could be wished".*

Although somewhat effusive with his use of the words

24 Argues that a staged taxidermy prop was used in the Burrell chicken eating-sequence [MRB 24-28], rather than a living specimen.

25 States that the photograph of the newly arrived Tyenna male [MRB 9] is a mounted specimen.

26 <https://australianmuseum.net.au/learn/australia-over-time/extinct-animals/the-thylacine/> Accessed: 6th December 2019.

27 Paddle identifier: HBT xiv.

28 Paddle identifier: MRB viii.

29 Allowing for three of the zoo images where the identity of the Thylacine cannot be confirmed (MRB 30, HBZ 5, HBZ 17), the total number of Thylacines shown within these photographs is approximately 42±3 animals.

30 Paddle identifier: ZSL v.

31 Ronald Campbell Gunn, FRS, (1808-1881).

“savage” and “treacherous”, neither of which were true, his concluding comment “position is not all that could be wished” certainly reflects the circumstance of the Thylacine in his photograph, with its body lying somewhat precariously positioned half in and half out of its water trough.

Sixty-eight years after Haes’ first foray into capturing the Thylacine on film, the zoologist David Fleay certainly got more than he bargained for when photographing the Kaine specimen<sup>32</sup> at the Hobart Zoo:

*“This male specimen, fed on horsemeat and hungry for variety, sided up to me as I knelt in his cage and slyly attempted to add my leg to his bill of fare” (Fleay, 1963).*

So, although not “savage” as Haes described, it appears that Thylacines were not averse to administering a warning nip to an unwelcome visitor’s leg, when under duress.

Miss Isabel Busby (1918), on a visit to the Beaumaris Zoo in February 1917 (*Visitors Book*<sup>33</sup> entry 10<sup>th</sup> February), made comment on an unnamed photographer’s efforts to photograph the zoo’s Thylacines:

*“On the morning of my second visit, a photographer called to take a photo of them, which he succeeded in doing after the expenditure of a good deal of time and patience, owing to their restlessness”.*

The naturalist Charles Leslie Barrett, in his book “*Rambles around the Zoo*” (1923), reflects upon his unsuccessful attempt to photograph the newly arrived Rowe cubs<sup>34</sup> at the Royal Park Zoo in Melbourne:

*“When three young ones arrived at the Gardens, I went to pay my respects. “A photograph?” Mr. Le Souef’s voice betrayed doubt, but he gave me a chance to get the pictures I so much desired. One of the little “tigers” was ringed with wire netting, and I jumped into the circle with a camera. In a second, the captive showed his wildness. He rushed round and round, charged the netting, and darted between my legs. I circled, and dodged, and jumped, but the “tiger” won, and I had to go home without a snap-shot even”.*

## Technical Considerations

Freeman (2009) discusses some of the technical constraints encountered in photographing the Thylacine:

*“The thylacine in a zoo was an erratic and disinterested photographic subject and it was almost impossible to avoid including the wire mesh and concrete of its often badly lit enclosure in a picture. Some photographs show evidence*

*of distortion as the camera failed to adjust the effect of the angle of vision, as an artist would. Technical limitations such as shutter speed in early cameras meant that any movement of the animal resulted in a blurred image. To compensate, some pictures were retouched, backgrounds were blanked out, animals posed, and tricks were imposed on the negative, the print, or the viewer”.*

A number of photographs within the TIR duly reflect Freeman’s comments, with several images blurred, out-of-focus or extensively retouched for publication. The five Burrell images of a Thylacine with a dead chicken (Appendix II, Images: MRB 24-28) exemplify Freeman’s remark “backgrounds were blanked out, [and] animals posed”, in that the photographs were intentionally staged using rocks and shrubbery, and extensively cropped in publication to conceal any evidence of the caged enclosure. The motivation for Burrell creating the impression of the Thylacine as a chicken thief remains something of a mystery, as there are few accounts in the historical record to indicate that the species routinely preyed on domestic poultry (Bailey, pers. com. 2019; Paddle, 2000, p.87).

## Guiler’s 1991 Compilation

The first purposeful attempt at compiling a record of the Thylacine on film was that by Guiler (1991). However, Guiler’s compilation was primarily intended for commercial publication and was limited in scope to a relatively small number of photographs, the majority of which were cropped motion picture stills. Guiler states:

*“There are no photographs of the animal in its natural environment and few in zoos either”.*

This statement is now known to be incorrect, as numerous photographs exist of Thylacines in zoos, and there are several images of Thylacines in the wild, albeit dead or expiring specimens.

## Images of the Thylacine in Zoos

Thylacines are known to have been photographed in nine of the sixteen zoos where they were displayed (Hobart [Beaumaris & Queens Domain], Sydney [Moore Park & Taronga], Melbourne, London, Berlin, Washington and New York). There are no photographs known to exist of any of the Thylacines that were exhibited in Launceston, Adelaide, Antwerp, Cologne, Paris, Madras or Glasgow<sup>35</sup>. Of these zoos, the City Park Zoo in Launceston is known to have exhibited more Thylacines than any other, yet incredibly, no images exist of any of the 88+ Thylacines (Paddle, pers. com. 25/4/2020) that were on display. Similarly, Adelaide Zoo hosted the second largest

32 Paddle identifier: HBT xxx.

33 TAHO Ref: NS823/1/17.

34 The three cubs were caught at Brittons Swamp in January 1914 by the trapper A. R. “Dick” Rowe. They were sold (via James Harrison) to the Melbourne Zoo, arriving on the 18th May 1914 (Paddle identifiers: RMZ: xxxviii, xxxix & xl).

35 Bostock’s Scottish Zoo was an indoor zoo / circus that operated in the New City Road area of Glasgow from 1897 to 1909. In an article entitled “Arrival of rare Animals at the Scottish Zoo”, published in the Tasmania News of the 31st July 1906 (p.3), the arrival of “a dog headed thylacine or zebra wolf from Tasmania” is noted.

mainland display after Melbourne, yet no images exist of any of its Thylacines. Even Melbourne Zoo has only two photographs of the same individual to show for the 46 Thylacines (Paddle, in press) known to have been exhibited there (Appendix II, Images: RPM 1-2).

## Images of the Thylacine in Circuses

In addition to zoological gardens, several circuses (St. Leon's<sup>36</sup>, Fitzgerald Brothers<sup>37</sup>, Wombwell's<sup>38</sup>, Sells Brothers<sup>39</sup> & Perry Brothers<sup>40</sup>) are known to have displayed caged Thylacines in their travelling menageries, but no photographs exist of any of these animals.

## Beaumaris Zoo [MRB]

The Beaumaris Zoo on the outskirts of Hobart (Sandy Bay) was internationally renowned for its display of Thylacines and Tasmanian devils. The zoo was first opened to the public in 1895 by Mrs. Mary Grant Roberts, who ran it as a private concern in the gardens of her home until her death on the 27<sup>th</sup> November 1921 (*The Mercury*, 28<sup>th</sup> November 1921, p.4). Of the 13<sup>41</sup> Thylacines exhibited at the zoo between 1908-1921 (Paddle, in press), 32 photographs are known to have survived (Appendix I, Table 1). Of these photographs, 24 are by known photographers (Oxer [1911-1915<sup>Revised</sup>], King [1916], Williamson [1909-1911], Park [1917], Tucker [1911], Judd [1918], Strickland [1917], Burrell [1912] and 8 by photographers whose identity has yet to be determined (Appendix II, Images: MRB 1, 8, 12, 13, 22, 30, 32).

Numerous photographers, both professional and amateur alike, visited the zoo to photograph its Thylacines, but few of their names are recorded in the *Visitors Book*. Paddle (2008) provides a possible explanation for their exclusion:

*"Until quite late in the zoo's history, artists who came to sketch or paint her animals were invited to sign the [visitors] book; but photographers who specifically came to photograph the animals were not so invited. Sometimes Roberts specifically identified by name in her diary photographers who came to Beaumaris. On other occasions, she merely noted that a "Man" called in and took photographs, and later "Man brought up proofs of photos". Occasionally, she failed to bother to note their presence in the zoo at all".*

36 Burrangong Argus, 31st May 1884.

37 *The Mercury*, 6th July 1896, p.3. Note: The Fitzgerald Brothers Thylacine was probably that captured in June 1896 by George Wainwright Jr. at the VDL Company property "Woolnorth", that was subsequently shipped to Sydney.

38 Hobart Town Daily Mercury, 6th December 1858, p.3.

39 Younger, 1988, p.146.

40 Lake Wakatip Mail, 4th December 1928, p.5.

41 Three additional Thylacines were received at the zoo, but never went on public display. The Bryant specimen was dead on arrival (6th June 1911) and the two Sidebottom pups lived for only a few days (7th May 1912 - 10th May 1912).

Mrs. Roberts' somewhat supercilious perception of professional photographers as mere tradespeople did not extend to hobbyist photographers of a certain social standing. One such esteemed visitor was the clergyman and Fellow of the Royal Geographical Society, the Rev. George H. Judd.

Judd visited the Beaumaris Zoo on two separate occasions (Sleightholme & Campbell, 2020), once in 1916 (*Visitors Book* entry 18<sup>th</sup> February), and again in 1918 (date not recorded). On his second visit, he brought with him his camera and captured an endearing photograph of a male and female Thylacine basking together in the sun (Appendix II, Image: MRB 23). The female in the background of Judd's photograph is the Foy specimen<sup>42</sup> captured in the upper reaches of the Arthur River in May 1916, and the smaller male in the foreground the O'May specimen<sup>43</sup> captured near Tyenna in June 1916. It was the O'May specimen that was subsequently sold to the Taronga Zoo (Sydney) in October of 1918.

The earliest known photograph to have been taken at the Beaumaris Zoo is that of an incomplete family group (female and three pups<sup>44</sup>) in their night den in July 1909 (Appendix II, Image: MRB 4). These Thylacines were captured by George Wainwright Jr., who worked as a stockman on the Van Diemen's Land Companies holding "Woolnorth", in the far northwest of the state. The same family group was photographed six months later in January 1910 (Appendix II, Images: MRB 5-7), and a comparison between the two sets of images provides modern-day researchers with a unique insight into the relative growth rate of the pups over a known period of time. The photographer in both instances was the respected Hobart photographer William Williamson.

Williamson specialised in animal and marine photography, and was for many years a regular contributor to the pictorial pages of the *Tasmanian Mail* and the *Illustrated Tasmanian Mail* (*The Mercury*, 9<sup>th</sup> August 1926, p.6). It was the same Williamson, in the role of a cinematographer, who shot a short (7 second) movie film<sup>45</sup> of one of the Thylacines on display feeding in its enclosure with a watchful Mrs. Roberts looking on. The Thylacine captured on Williamson's film can be readily identified as the large Tyenna male<sup>46</sup> caught by Ted Power in early 1911.

Another of the known Beaumaris photographers was a Mr. H. Tucker, who visited the zoo on the 27<sup>th</sup> September 1911. On the day of Tucker's visit, Williamson had returned with the intent of continuing to film the Thylacines, but abandoned his efforts due to poor light. Undeterred by the inclement weather, Tucker proceeded to take a series of five photographs of the Tyenna and Woolnorth males

42 Paddle identifier: MRB xii.

43 Paddle identifier: MRB xiii.

44 Paddle identifiers: MRB iii-vi.

45 [http://www.naturalworlds.org/thylacine/captivity/films/flv/film\\_1.htm](http://www.naturalworlds.org/thylacine/captivity/films/flv/film_1.htm)

46 Paddle identifier: MRB viii.



being hand fed by Mrs Roberts through the enclosure fence (Appendix II, Images: MRB 17-21). Undoubtedly, the most well-known of Tucker's photographs, taken around the same time as his series, shows the same two males in side-by-side profile (Appendix II, Image: MRB 15). This image is frequently reproduced in publication as an example of sexual dimorphism in the species (Bailey, 2001, p.126; Owen, 2003, p.108; Moeller, 1997, p.21; Guiler & Godard, 1998, p.174), the two differing sized males being erroneously cited as an adult male / female pair.

In addition to Williamson and Tucker, Paddle (2008) lists several other photographers (*H. D. Baker [19/11/1911 and 24/11/1911]; John Bradford [27/11/1911]; Henry Patten [14/3/1912]; Sydney Cloman [12/11/1913]; O'Neil Sevier [12/11/1913]*) who visited the zoo to photograph the large Tyenna male, which he correctly credits as being "*the most frequently photographed of Mrs. Roberts' Thylacines*". Images of this Thylacine, either on its own or with others, constitute 21 of the 32 known Beaumaris images<sup>47</sup>. None of the photographs taken by Baker, Bradford, Patten, Cloman or Sevier have been positively identified, but undoubtedly number amongst the images presently classified as photographer unknown.

Several of the Beaumaris Thylacine images are known to have been commercially reproduced as postcards, including that of the newly acquired Tyenna male (Appendix II, Image: MRB 9) and the 1910 Woolnorth family group (Appendix II, Image: MRB 5).

## Hobart Zoo [HBZ]

The Hobart Zoo on the Queen's Domain was the publically funded<sup>48</sup> successor to Mrs. Roberts' zoo, and also bore the name "Beaumaris", in honour of its founder. To prevent confusion, we have elected to use Hobart Zoo [HBZ], rather than Beaumaris [MRB], as the comparative descriptor for this zoo in this paper.

The Hobart Zoo is known to have exhibited 25<sup>49</sup> Thylacines between 1922 and 1936 (Paddle, in press), of which 28 photographs are known to have survived (Appendix I, Table 2). Of these photographs, 19 are by known photographers (Sheppard [5/1936], King [1933], Jackson [6/1928], Fleay [12/1933], Sharland [1928], Chandler [1935], Basset Hull [1/1928], Selby [1928], Pitfield [1931-1936] & Stewart [4/1931]) and 9 by photographers whose identity has yet to be determined (Appendix II, Images: HBZ 4, 5, 8<sup>[1]</sup>, 9, 17, 21, 24, 25, 28).

Most contemporary authors acknowledge Elias Churchill with the capture, in 1934, of the last Thylacine to have entered Hobart Zoo's collection. This despite the fact, that the two specimens Churchill (*in interview*) stated he caught

alive, an adult male (sold to Hobart in 1923) and a female with three pouch pups (the Mullins family group caught with the assistance of Churchill), were already accounted for in the zoo records. If a third live capture did occur in 1934, either by Churchill himself or with his assistance, one could question why he did not recall this event during interview (Sharland, 1957 & Bailey, 1967). Churchill's omission is further compounded by the fact that the Hobart City Council Reserve Committee records for 1934 make no reference to the purchase of a Thylacine for the zoo. Sleightholme, Gordon & Campbell (2019) state that:

*"The only specimen on display at the zoo at the beginning of 1934 was the Kaine specimen as photographed by Fleay", and that "There are no records or published accounts of two Thylacines on simultaneous display at the zoo post-1934".*

This statement is reinforced by the recent discovery of a motion picture film, "*Tasmania the Wonderland*", in the National Film & Sound Archives (Canberra)<sup>50</sup>. The film, shot by the cinematographer Sidney Cook, is dated to March 1935 (Williams, pers. com. 16/5/2020) and clearly shows the Kaine Thylacine pacing around within the confines of its enclosure. The contemporary commentary states: "*This is the only Thylacine in captivity in the world*". If a Thylacine captured by Churchill (or his close associates) did enter the zoo's collection in 1934, then it must surely have died within days of its arrival. Further, Sleightholme, Gordon & Campbell (2019) note that all fourteen of the Hobart Zoo photographs, previously labelled in publication as images of Churchill's Thylacine, are now known to be of the Kaine specimen<sup>51</sup> (Appendix II, Images: HBZ 1, 2, 3, 6, 11-16, 22<sup>[1]</sup>, 23, 26, 27) and conclude:

*"These paradoxes leave us with a number of perplexing questions relating to the end display of the species at the zoo, that will undoubtedly require further research to resolve".*

Arguably, the finest series of photographs of the Thylacine ever taken were those by the zoologist David Fleay on his visit to the Hobart Zoo on the morning of the 19<sup>th</sup> December 1933 (Appendix II, Images: HBZ 11-16). Fleay's subject was the now adult Kaine specimen, originally captured as a juvenile near Preolenna in 1931 (Sleightholme, Gordon & Campbell, 2019). In addition to his photographs, Fleay shot what has since become an iconic movie film (duration 45 seconds)<sup>52</sup> of the Kaine Thylacine pacing around within the confines of its enclosure, yawning (displaying its impressive gape), sniffing the air, lying down and scratching itself in the manner of a dog.

The most frequently reproduced of the Hobart Zoo images is a photograph by Ben Sheppard (often heavily cropped in publication) of the now aged Kaine specimen,

<sup>47</sup> Table I & Appendix II, Images: MRB 3, 8, 9, 11, 12, 14, 15-21, 24-28, 29, 32.

<sup>48</sup> Operated by the Hobart City Council.

<sup>49</sup> An additional six specimens, including the transfer specimen from Beaumaris, died before they went on display (Paddle, in press).

<sup>50</sup> NFSA title: 55567.

<sup>51</sup> Paddle identifier: HBT xxx.

<sup>52</sup> [http://www.naturalworlds.org/thylacine/captivity/films/flv/film\\_5.htm](http://www.naturalworlds.org/thylacine/captivity/films/flv/film_5.htm).

taken two and a half years after Fleay's visit, in May 1936 (Appendix II, Image HBZ 1). In retrospect, this is possibly the last known photograph of a living Thylacine, as no other photographs in the TIR postdate this image.

Six of the remaining Hobart Zoo photographs feature the mother of the Mullins family group<sup>53</sup> (plus two others), instantly recognisable by her amputated left forelimb. The *Examiner* of the 18<sup>th</sup> January 1924 (p.4) details the reason for the missing limb:

*"As a result of injuries received to a foot in the trap Mr. Mullins was obliged to amputate it".*

The Mullins female was resident at the zoo from February 1924 until her death in March 1928. Following the premature deaths of two of her pups, she and her surviving female pup, were relocated to the main Thylacine enclosure at the rear of the zoo during the early months of 1926. As all of the images of the Mullins female are in the main enclosure, this readily identifies the two-year period (1926-1928) in which the photographs were taken (Appendix II, Images: HBZ 4, 9, 10, 19, 21, 28).

The only known photograph of a Thylacine interacting with a pet dog, albeit on opposite sides of the enclosure fence, was taken at the Hobart Zoo (Appendix II, Image: HBZ 2). This photograph<sup>54</sup>, reproduced as a post card, was originally dated to 1928 by the naturalist Gilbert P. Whitley (1973). Subsequent analysis of the stripe pattern and body markings by Sleightholme & Campbell (2014) proved that the image was of the Kaine specimen, taken, not in 1928 as Whitley asserted, but in the early months of 1933.

## Royal Park Zoo (Melbourne) [RPM]

Of the mainland zoos, the Royal Park Zoo in Melbourne is credited with the greatest number of Thylacines on display, with a total of 46 animals (Paddle, in press) exhibited between 1864 and the cessation of its display in 1931. Yet surprisingly, with such a strong species representation, only two photographs dating to around 1905 are known to exist of one of its Thylacines (Appendix II, Images: RPM 1-2). Both of the Melbourne Zoo photographs were taken by Benjamin James Lane, formerly an illustrator for the *Illustrated Sydney News* (1890-1893) and photographic studio processor for *The Mercury* (1893-1903). After retiring from his career in the press, Lane joined the zoo as a full-time member of staff between 1903-1915 (*The Mercury*, 5<sup>th</sup> September 1936, p.15). Each of Lane's photographs were retouched for publication in an attempt to eliminate the blurring caused by movement

of the Thylacine's head during the exposures.

An article published in the *Daily Telegraph* (Launceston) on the 12<sup>th</sup> August 1919 (p.4) confirms that at least one other photograph (now presumed lost) was taken at the zoo:

*"Mr. Gibson, on his next visit to Melbourne called on Mr. Le Souef who showed him a half-grown Tasmanian Tiger which he had in the cages, and at his request took a photograph of it".*

Paddle (pers. com. 25/9/2018) notes that a further photograph, dating to December 1899, is known to have existed. The photograph features Albert Le Souef, the zoo's director (1882-1902), standing in front of the Thylacine cage with the animal's head protruding inquisitively through the bars. This photograph may possibly still survive, but at the time of writing, it had not been located.

## Moore Park Zoo (Sydney) [MPS]

Moore Park was Sydney's first zoo, opening its gates to the public in 1884. Paddle (2012, p.85) states that the zoo exhibited two Thylacines, the first acquired from Thomas Jennings on the 15<sup>th</sup> October 1885<sup>55</sup>, and the second from a Mr. Stevenson in March 1900<sup>56</sup>. In 2016, Sleightholme & Campbell presented compelling evidence of a further two (possibly three) Thylacines that were exhibited at the zoo.

Minutes of the Zoological Society of NSW were published in the *Sydney Morning Herald* of the 6<sup>th</sup> September 1886 (p.9), in which an offer of two Thylacines from the City Park Zoo in Launceston was accepted:

*"A letter was read from Mr. McGowan, of Launceston, offering two Tasmanian wolves for £12, delivered in Sydney. The secretary reported that he had accepted the offer by cablegram".*

In addition, the *Queanbeyan Age* of the 9<sup>th</sup> September 1886 (p.2) acknowledged that:

*"The Sydney Zoo is to be enriched by two Tasmanian wolves".*

A month later, the *Sydney Morning Herald* of the 4<sup>th</sup> October 1886 (p.3) confirmed the purchase had been completed:

*"The following specimens have been acquired by purchase since the monthly meeting: - A Russian eagle, two Tasmanian wolves, two cassowaries".*

Their acquisition takes the total number of Thylacines known to have been displayed at the zoo from two to

<sup>53</sup> The Mullins family group (female and three pups) (Paddle identifiers: HBT v-viii) were captured by the bushman Walter "Jack" Mullins near Tyenna, in the Florentine Valley, in June 1923.

<sup>54</sup> G. P. Whitley Papers, Australian Museum Archives (Ref: AMS139/4/20/1).

<sup>55</sup> *Launceston Examiner*, 6<sup>th</sup> October 1885, p.3.

<sup>56</sup> *Daily Telegraph* (Launceston), 21<sup>st</sup> March 1900, p.6.

four. In addition, Sleightholme & Campbell located further newspaper references relating to the donation of two Thylacines to Moore Park by Dr. George Edward Rundle in 1900:

*“Dr. Rundle (Rooty Hill), a Tasmanian wolf”, (Evening News, 7<sup>th</sup> April 1900, p.3),*

*“George Edward Rundle, F.R.C.S.E., a Tasmanian wolf”, (Evening News, 7<sup>th</sup> July 1900, p.3).*

Rundle was a trustee of the Sydney Museum (1901-1906), and a member of the Zoological Society, of which for some time he had been president<sup>57</sup>. It is probable that the April donation refers to the Stevenson capture of March 1900, however this leaves the July 1900 donation as a potential fifth and previously unknown specimen.

Of the four (possibly five) Thylacines on display at the zoo, only two photographs are known to exist, most likely of the Stevenson specimen, shown pacing the length of its white walled enclosure (Appendix II, Images: MPS 1-2). Both of these images are believed to have been taken by the naturalist Harry Burrell<sup>58</sup> prior to 1905, after which the zoo's Thylacine display ceased.

## Taronga Park Zoo (Sydney) [TZS]

The Taronga Zoo in Sydney opened to the general public on the 7<sup>th</sup> October 1916. Only one Thylacine was ever displayed at the zoo, the O'May specimen obtained from the Beaumaris Zoo in 1918. A single photograph exists of this specimen, taken by Gilbert P. Whitley in 1922 (Appendix II, Image: TZS 1). Sleightholme & Campbell (2020, in press) note:

*“Shortly after arriving at the zoo, it was placed in an enclosure next to a puma (Felis concolor). One morning, the puma managed to pull the Thylacine's tail through the enclosure fence and bite most of it off. Consequently, the only surviving photograph of the O'May Thylacine from the Taronga Zoo shows it pacing along the perimeter fence of its enclosure displaying the remnant stump of its tail. Despite its unfortunate encounter with its feline neighbour, the O'May Thylacine survived at the zoo for nearly five years, dying on the 14th November 1923”.*

Whitley appears to have been so perturbed by the less than perfect state of the Taronga specimen, that he never thought the image worthy of publication.

## Regent's Park Zoo (London) [ZSL]

In 1850, the Regent's Park Zoo in London was the first zoo in the world to exhibit Thylacines. Outside of Australia, it displayed more Thylacines than any other. It continued

to display the species, albeit intermittently, between 1850 and 1931, the longest span of display of any zoo. Of the 20 Thylacines exhibited (five others died in transit), 22 photographs are known to have survived (Appendix I, Table 4). All but four of the Regent's Park Zoo photographs were taken by known photographers, a number of which were professionally associated with the zoo (Haes, F. [1]; Renshaw, G. [1]; Berridge, W. S. [6]; Dando, W. P. [3]; Smith, D. S. [2]; Bond, F. W. [3] and Medland, L. [2]). Two of the images photographed by persons as yet unknown, were only recently rediscovered (Sleightholme & Campbell, 2018) (Appendix II, ZSL 21, 22).

Thylacines were exhibited in a diverse assortment of enclosures at the zoo: Terrace Dens, Vulture Cages, Kangaroo Sheds, Sloth & Anteater House, Thylacine Sheds, Hyena Dens, Bear Dens, Civet House, Wolves and Foxes Den, Small Mammal House, Lemur House, and North Mammal House, although only three of these sites (Kangaroo Sheds, Lemur House, and North Mammal House) feature in any of the surviving photographs. Photographs of Thylacines taken within these enclosures were published annually in the *Official Guide to the Gardens*. Consequently, the guides have proven invaluable in helping to accurately date a number of the images.

## Berlin Zoo [BZG]

Of the four Thylacines known to have been displayed at the Berlin Zoo between 1864-1908, only a single photograph exists of an adult male<sup>59</sup> within the Carnivore House (Raubhiere) dating to 1905 (Appendix II, Image: BZG 1). This Thylacine was procured for the zoo along with a female<sup>60</sup> from the wild animal dealers, the Reiche Brothers<sup>61</sup>, on the 25<sup>th</sup> February 1902. It survived in captivity until the 16<sup>th</sup> January 1908. Moeller (pers. com. 2005) notes that a further photograph existed of the two Reiche Thylacines standing side-by-side, taken by the zoo's director Ludwig Heck<sup>62</sup> in 1904, but regrettably, this was destroyed during a bombing raid in WWII.

## National Zoo (Washington, D.C.) [NZW]

The National Zoo in Washington, D.C. (Est. 1891) exhibited five Thylacines between 1902-1909, all of which were sourced from the City Park Zoo (Launceston) by Dr. Frederic W. Goding, the American Consul to NSW. The first arrivals were an incomplete family group comprising a female and her three pouch young in September 1902<sup>63</sup>. An unrelated male was added to the collection two years later in July 1904<sup>64</sup>. Five photographs are known to have survived of the zoo's Thylacines (Appendix II, Images: NZW 1-5),

59 Paddle identifier: BRL iv.

60 Paddle identifier: BRL iii.

61 Via the Sydney-based exporter August Göring.

62 Director of Berlin Zoo (1888-1931).

63 Paddle identifiers: NZW i-iv.

64 Paddle identifier: NZW v.

57 *Evening News* (Sydney), 17<sup>th</sup> October 1906 (p.3).

58 Henry (Harry) Burrell (1873-1945).

with three of the photographers named (E. J. Keller, Herbert Lang and Henry Fairfield Osborn<sup>65</sup>). Undoubtedly, the most frequently reproduced of the National Zoo images is Keller's 1903 photograph of the mother from the family group with one of her now juvenile offspring standing on the stone steps to their inner den (Appendix II, Image: NZW 1).

## Bronx Zoo (New York) [NYZ]

Four Thylacines were exhibited at the Bronx Zoo between 1902 and 1919. The first being a young adult male<sup>66</sup> obtained from Carl Hagenbeck, the German wild animal dealer, that arrived at the zoo on the 17<sup>th</sup> December 1902. It survived in captivity until the 17<sup>th</sup> August 1908. Three photographs are known to exist of this specimen, all dating to 1903 (Appendix II, Images: NYZ 1-3). The photographer was Elwin Roswell Sanborn (1869-1947), who began his career at the zoo in 1899, the same year that it opened to the public. He went on to establish the zoo's first photographic department in 1901, and subsequently became its official photographer. Bridges (1974) notes:

*"The gear Sanborn used was larger than most of the wildlife he photographed. Heavy cameras and glass plate negatives moved with him from location to location. Action shots were not the demand; instead, Sanborn sought to produce clear, sharp shots that showed the animals exactly as they appeared and with an attractive background".*

Sanborn's lasting legacy are three of the finest photographs of the Thylacine in existence.

## Other Images

In addition to the images of Thylacines in zoos, there are 16 other photographs known to exist, 12 of which feature dead or expiring Thylacines. These images comprise:

- Two photographs of a female Thylacine in a holding pen (Appendix II, Images: JHW 1-2). These images are often cited in publication as having been taken at the Beaumaris Zoo (Moeller, 1987, p.145; Guiler 1991, p.4 & Guiler & Godard, 1998, p.176), but the actual location is James Harrison's wild animal dealership in Wynyard (Tasmania). Blackwell (1951) states: *"Harrison kept tigers in heavy wooden cages with iron bars"*. Sargent (2013) notes: *"Harrison's pens were quite small, eight feet by eight feet, something like that and as I can remember, just fairly roughly constructed"*. Both photographs were taken in October 1915 by a local photographer, Miss Myra Bessie Sargent, who ran a small photographic studio from her home in the town. The North Western Advocate and the Emu Bay Times of the 20th December 1916 (p.4) notes:

*"Miss Sargent's skill in photography is too well known*

*to need more than a mention"*.

Myra's sister served as a nurse in the Great War, and regularly corresponded home. In an article published in the *North Western Advocate and the Emu Bay Times* of the 19<sup>th</sup> October 1916 (p.4) entitled *"Wynyard Nurses Letter"*, the provenance of the two photographs is confirmed:

*"In a letter received by her parents this week, Sister A. R. Sargent gives a chatty account of several of her experiences. A 'double' V.C., who was one of her charges, was greatly interested in a photograph of a Tasmanian hyena [tiger] taken by Miss Sargent, of Wynyard, at Mr. James Harrison's residence, and announced his intention of trying his hand at Tasmanian sport when he had finished the serious business he was engaged in".*

The Thylacine shown in the Sargent photographs is most likely that caught by a Mr. Bourke and party, as reported in the *North Western Advocate and the Emu Bay Times* of the 23<sup>rd</sup> October 1915 (p.4):

*"Mr. James Harrison had on view yesterday afternoon a very fine specimen of a female Tasmanian tiger. This one was caught about 20 miles back in the bush by Mr. Bourke and party, and was brought in to Mr. Harrison".*

The Bourke Thylacine<sup>67</sup> was sold to Mrs. Roberts at the Beaumaris Zoo, arriving at the zoo on the 23<sup>rd</sup> October 1915. It remained on display for eighteen months, prior to being sold to the Sydney-based animal dealer Ellis S. Joseph for onward shipment to the Bronx Zoo. It arrived in New York on the 14<sup>th</sup> July 1917, and remained on display until its death on the 13<sup>th</sup> September 1919.

- Two photographs dating to 1923 of a female with her three young. These Thylacines were captured by the bushman Walter "Jack" Mullins in the Florentine Valley in June 1923. Prior to their eventual sale to the Hobart Zoo in early February 1924, Mullins displayed the family group as sixpenny attractions at various country fairs around Tasmania. Both photographs show the Thylacines in a straw-strewn barred cart at a country fair near Bicheno on the east coast of Tasmania.

One of the photographs, often heavily cropped in publication, shows the family group huddled together resting (Appendix II, Image: MFG 1). This image was taken by the field naturalist Herbert John King, honorary photographer to the Queen Victoria Museum and Art Gallery (1958-1962). Tassell (2000) notes:

*"Having taken up photography as a boy, King's interest*

65 President of the New York Zoological Society, 1909-1925.

66 Paddle identifier: NYZ i.

67 Paddle identifier: MRB xi.



*in Tasmania's natural history developed into a passion that came to dominate his photography and his life".*

The other photograph, only recently rediscovered within family archives, was possibly taken by Mullins himself, and shows the female displaying a cautioning jaw gape with her pups cowering behind her (Appendix II, Image: MFG 2).

- The William George Weaver trophy kill photograph of 1869 (Appendix II, Image: WKL 1). The photographer of the formal Weaver portrait is unknown, but Sleightholme & Campbell (2016) surmise that it could have been taken by Victor Albert Prout (1835-1877), the inventor of the panoramic camera, who visited Australia between 1866 and 1875.
- Two photographs of Albert Quarrell and his kill (both standing and seated), taken by Charles Brown at Fitzgerald in December 1911 (Appendix II, Images: WKL 2 & 3). Bailey (2001, pp.105-106) provides relevant background detail on the circumstances leading up to the kill:

*"Albert Quarrell discovered the Thylacine agitating his bullock team whilst logging near Tyenna. Grabbing the tiger by the tail, Quarrell was savaged when the animal managed to sink its teeth into him and was forced to let go. Summoning help from other bushmen nearby, they managed to corner it in a patch of scrub, where it was shot. The carcass was sold to the photographer Charles Brown".*

- A single photograph by J. "Jackie" H. Robinson, dated 5<sup>th</sup> January 1924, of sixteen-year-old Clem Penny, and possibly his grandfather, holding up his kill by its rear legs (Appendix II, Image: WKL 4). Haygarth (2016<sup>1</sup>) notes that the Thylacine was a female, killed by a blow from a tree branch, in defence of her pups. The Penny kill took place in the North Bischoff Valley near to the Arthur River, and was reported in the *Waratah Courier* of the 17<sup>th</sup> January 1924 (p.46).
- A single photograph by Arthur Ernest Warde, dated 1901, of two recently killed Thylacines hanging outside a bushman's hut (Appendix II, Image: WKL 5). Haygarth (2016<sup>2</sup>) states:

*"Eric Guiler speculated that they might have been taken by a Waratah hunter John Cooney who collected two government thylacine bounties in 1901. In fact, the photographer, Arthur Ernest Warde, was himself a hunter and future Woolnorth 'tigerman', and the photo probably depicts his own kills".*

- Two photographs of a dead, not resting Thylacine as is often quoted in publication, curled up in the grass (Appendix II, Images: WKL 11-12). The location, date and photographer are unknown, but the images most

likely date from the 1920s.

- Five photographs of the last fully documented wild kill<sup>68</sup> by Wilfred Batty at his father's farm near Mawbanna on the 13<sup>th</sup> May 1930 (*Advocate*, 14<sup>th</sup> May 1930, p.6). Two of the photographs show Batty and his dog with the rigged kill propped up against a fence, and the remaining images are of the expiring Thylacine on a woodchip pile. Two of the photographs were taken by Pat O'Halloran, a postal mechanic from Stanley (Appendix II, Images: WKL 6-7), one by a Mr. Lily of Upper Calder (Appendix II, Image: WKL 8), and two by photographers as yet unknown. (Appendix II, Images: WKL 9-10).

## Retrospective Dating of Images: Format

Historically, the accepted default dating for many of the Thylacine photographs was decade-assigned (1900s, 1910s, 1920s, 1930s), rather than being attributed to a specific date or year. Within the TIR, we have endeavoured to improve on these somewhat imprecise approximations. Dates have been presented in six formats with each represented in the TIR tables by a 3-letter prefix prior to the date column (Appendix I, Tables 1-4).

1. Precise Date Known (PDK) - For those images where a precise date is known, this is presented in full e.g., 1<sup>st</sup> January 1900. Of the 112 photographs within the TIR, there are 19 (17%) images designated under this prefix.
2. Partial Date Day Uncertain (PDU) - For those images where the year and month are known, but not the day, these are presented with the month in brackets prior to the year date e.g., (Jan) 1900. There are 26 (23%) images within the TIR designated under this prefix.
3. Partial Date Month Uncertain (PMU) - For those images where the year is known, but the precise month is uncertain, these are presented with the calendar period in brackets prior to the year date e.g., (Jan-Mar) 1900. There are 16 (14%) images within the TIR designated under this prefix.
4. Year Date Only (YDO) - For those images where the year is known, but not the month or day, these are presented with the year date only e.g., 1900. There are 37 (33%) images within the TIR designated under this prefix.
5. Known Period of Display (KPD) - For those images where neither the year, month or day are known, these images are presented with the known period of display shown in brackets e.g., (1900-1904). There are 9 (8%)

<sup>68</sup> It should be noted that it is now generally accepted that other, less well documented kills occurred after 1930. Griffith (1972<sup>1</sup>) states: "It is common knowledge in Tasmania that there were others killed after this date". Bailey (pers. com. 8/4/2019) concurs: "It was well known in rural communities that Thylacines were killed illegally after this date, either accidentally whilst trapping for game, or with deliberate intent".

images within the TIR designated under this prefix.

6. **Not Yet Determined (NYD)** - For those images where there is insufficient information at present to format a date. There are 5 (5%) images within the TIR designated under this prefix.

## Retrospective Dating of Images: Anatomical Features

External anatomical features such as the stripe pattern, snare or trap marks, amputated limbs, collar marks and facial markings, can often assist in establishing the identity of a Thylacine shown in a photograph. Of these features, the stripe pattern is undoubtedly the most important. Sleightholme & Campbell (2019) state:

*“As with human fingerprints, the stripe pattern of the Thylacine (*Thylacinus cynocephalus*) is unique to each individual, with a marked degree of variation and asymmetry”.*

The Sheppard photograph [Appendix II, Image: HBZ 1] is a good example of how the stripe pattern was used to positively identify a specimen. This photograph had previously been dated by several authors (Paddle, 2012, p.84; Lang, 2014, p.50; Owen, 2003, p.132; Griffith, 1972<sup>2</sup>; Fuller, 2013, p.171; Pask, 2014, p.160) to 1928 or pre-1930. Sleightholme, Gordon & Campbell (2019), proved by a comparative analysis of the stripe pattern, that the Thylacine shown in the Sheppard photograph was the same as that photographed by Fleay [Appendix II, Images: HBZ 11-16], reliably dating the image to post-1933. Further investigation of the background detail, together with the discovery of an entry in Sheppard's notebook, confirmed that the photograph was taken in May 1936.

Another feature that can readily identify a specific Thylacine is visible evidence of a snare / trap mark or related injury. The Blackwood Thylacine<sup>69</sup> caught near Fingal in June 1910 sustained a leg injury in its capture. This Thylacine was eventually sold by Mrs. Roberts to the Regent's Park Zoo, arriving in London on the 21<sup>st</sup> November 1910, and remaining on display until its death on the 25<sup>th</sup> December 1914. The healed fracture to the right foreleg is clearly visible in photographs of this specimen, permitting accurate dating of the images (Appendix II, Images: ZSL 4, 5, 12, 15).

## Retrospective Dating of Images: Photographers' Movements

Confirmation in the press of a visit to a zoo by a named photographer can be used to accurately date a photograph for which the date had previously been unknown, or had been decade assigned. The *Mercury* newspaper of the 6<sup>th</sup>

June 1928 (p.7) states:

*“Mr. Sidney William Jackson, R.A.O.U., a distinguished ornithologist and botanist, is spending a brief holiday in Hobart. He hails from Scone, N.S.W., and though he is here on holiday, as he very truly says, no man of science ever has a complete holiday. He is making a superficial study of the fauna and flora of Tasmania during his fortnight's stay, and has expressed himself as pleasurably impressed by his visits to the Beaumaris Zoo and the National Museum. At the zoo, he was personally conducted by Mr. Reid, the curator”.*

This visit by Jackson to the Hobart Zoo has enabled photograph HBZ 7, of the *Porteus* pouch-gravid female<sup>70</sup>, to be precisely dated to early June 1928.

Tasmanian-born Arthur. F. Basset Hull (1862-1945) was a distinguished ornithologist, a member of the Taronga Zoological Park Trust, and for some years, both president (1917-19, 1928-29, 1938-39) and secretary of the Royal Zoological Society of New South Wales. Hull was also an accomplished wildlife photographer, as noted in an article in the *Sydney Morning Herald* of the 25<sup>th</sup> July 1924 (p.8):

*“He is well known for the excellent photographs he has taken of the animals at Taronga Park”.*

Two photographs within the TIR [Appendix II, Images: HBZ 18 & 19] are credited to Basset Hull, although neither of these images were taken at the Taronga Park Zoo. With reference to the first of Basset Hull's photographs, that of a lone Thylacine staring directly at the camera, one can clearly see a white painted water storage tank in the background (Appendix II, Image: HBZ 18). This structural feature clearly identifies the locality as the rear of the polar bear enclosure at the Hobart Zoo. Basset Hull's second image, heavily cropped in publication, features a pouch-gravid female with two other females<sup>71</sup> (Appendix II, Image: HBZ 19). For some time, this image was incorrectly believed to have been taken at the Adelaide Zoo in 1898 (Paddle, 2000, p.58). However, the surviving glass plate negative clearly shows background details that identify the location as the Hobart Zoo. It is known that Bassett Hull visited Tasmania as a delegate to the 19<sup>th</sup> Congress of the Australasian Association for the Advancement of Science in January 1928 (*The Mercury*, 16<sup>th</sup> January 1928, p.7). It appears highly likely that during his stay, he took time off from the conference to visit the zoo. Both of his images can therefore be reliably dated to January 1928.

In photographs where little is known about the provenance, other than the name of the photographer, certain assumptions can be made. Lionel C. Pitfield was an active member of the Tasmanian Photographic Society in the

69 Paddle identifier: MRB vii.

70 Paddle identifier: HBT xxi.

71 Paddle identifiers: HBT xxi, v & viii.

early 1930s (*The Mercury*, 25<sup>th</sup> May 1933, p.7). His motion-blurred photograph of a lone Thylacine in its enclosure at the Hobart Zoo (Appendix II, HBZ 22), although undated, is more than likely to have been taken during this time. As the only Thylacine on display at the zoo during the early 1930s was the Kaine specimen, in all probability Pitfield's photograph is of this specimen. In the TIR, the Pitfield entry is therefore bracket dated (1931-1936) against the known period of display [KPD], as is the Paddle identifier (HBT xxx), to indicate a degree of uncertainty.

## Retrospective Dating of Images: Backgrounds

Background features, such as the construct of the enclosure and the placement of stones, boulders or vegetation within or surrounding it, can often provide vital clues to assist in dating or sequencing the images.

Sleightholme, Gordon & Campbell (2019) used the depleted tree count behind the Thylacine enclosure at the Hobart Zoo to effectively prove that the Sheppard photograph (Appendix II, Image: HBZ 1) was taken after the Fleay series (Appendix II, Images: HBZ 11-16).

Another of the images where the background features were used to resolve a dating disparity is a photograph of a Thylacine standing upright against its night enclosure door, taken by William Dando at the Regent's Park Zoo in London (Appendix II, Image: ZSL 10). This photograph is dated by Edwards (2012, p.231) to c1912, whereas Paddle (2000, p.51) dates the photograph to c1903. On examination of the background detail, the stone step in front of the door, the construct of the door itself, and the pattern of the brickwork, clearly identifies the location as the Kangaroo Sheds. This reliably dates the photo to pre-1910, after which the Thylacine display was relocated to the Lemur House. A stripe pattern comparison between the Thylacine in the Dando photograph<sup>72</sup> and that shown in two of his other images (Appendix II, Images: ZSL 9 & 11) clearly identifies the Thylacine as the specimen purchased from the London wild animal dealer William Jamrach on the 26<sup>th</sup> March 1902. This Thylacine was moved to the Kangaroo Sheds shortly after arrival, which corroborates Paddle's earlier dating.

## The Thylacine Image Registry [TIR]

Each image within the TIR is individually numbered and listed under the following categorical headings: 1) Zoo / Historical, 2) Description, 3) Enclosure, 4) Date Format & Date [if known], 5) Paddle Identifier(s), 6) Photographer [if known], 7) Holding Collection, 8) Series, 9) Condition, and 10) Number of animals shown.

A summary of the findings is presented in four tables

in Appendix I, and a thumbnail of each of the images appears in Appendix II. It should be stressed that each of the tables in the TIR are not intended to be the definitive guide to the photographs, instead, they are the most current assessment of the images at the time of publication. Undoubtedly, these tables will undergo further revision as new information comes to light.

All of the photographs within the TIR are individually numbered [1-112] and preceded by a 3-letter prefix, representing a zoo<sup>73</sup> or place of origin<sup>74</sup>. A simple, one-line description is given for each of the images to further assist in its identification.

Photographic images within the TIR exist as glass plate negatives, lantern slides, stereo views, standard photographic prints, commercial postcards, book or newspaper illustrations. The original format is noted in the TIR where relevant.

Paddle's Roman numeric identifiers have been used throughout the TIR to identify each of the Thylacines shown in the photographs. If there is any doubt over the identity of the Thylacine depicted, the identifier is presented in brackets. In order to promote the use of a standard format, the authors recommend that Paddle's identifiers be universally adopted to standardise all future research relating to zoo specimens.

An enclosure column has been added to the TIR for international zoos (Appendix I, Table 4). This addition is relevant to zoos such as the Regent's Park in London, where Thylacines were displayed in different enclosures over known periods of time. Knowledge of when a specific enclosure was in use, and the Thylacines that were displayed within it, greatly assists with dating of the photographs. A good example is the Lemur House, which was used to exhibit Thylacines between 1910 and 1914. During this period, four Thylacines were displayed<sup>75</sup>, which narrows the possibilities as to which animal(s) are shown in the photographs.

The identity of the photographer is unknown for 29 (26%) of the 112 images in the TIR. Where the photographer is known, their name is recorded in the appropriate column in Appendix I, Tables 1-4. If the identity of the photographer is uncertain or contested, as is the case with HBZ 23<sup>76</sup>, the name or names are bracketed.

73 **MRB** - Mrs. Roberts Beaumaris; **HBZ** - Hobart Zoo; **WKL** - Wild Kill; **JHW** - James Harrison (Wynyard); **MFG** - Mullins Family Group; **RPM** - Royal Park (Melbourne); **TZS** - Taronga Zoo (Sydney); **MPS** - Moore Park (Sydney); **ZSL** - Regent's Park Zoo (London); **BZG** - Berlin Zoological Garden; **NZW** - National Zoo (Washington, D.C.); **NYZ** - Bronx Zoo (New York).

74 **WKL** - Wild Kill; **JHW** - James Harrison Wynyard; **MFG** - Mullins Family Group.

75 Paddle identifiers: ZSL xvi, xvii, xviii & xix.

76 The identity of the photographer of HBZ 23 is contested, with the TAHO crediting the image to R. Davis, and the QVM crediting it to H. J. King.

72 Paddle identifier: ZSL xv.

The name of the holding institution or individual private collector (where known), together with the image reference number (if applicable), is noted in the “Collection Reference” column of the TIR for each of the listed photographs. Occasionally, separate institutions provide different IDs for the same image, an example being the photograph of the Thylacine with a young boy (Appendix II, HBZ 23). The original glass plate negative is held by the Tasmanian Archives Office in Hobart (AOT: NS1377/1/59), and a copy of the image at the Queen Victoria Museum in Launceston (QVM. 1983. P.1944). In such circumstances, the institution holding the known copy is bracketed.

The original negatives or plates for nine of the photographs listed in the TIR no longer exist, with copies now only referenceable from published sources (Appendix II, Images: MRB 6 [Savage English, T. M. 1910], MRB 7 [Button, H. 1909], HBZ 18 [*The Mercury*, 25<sup>th</sup> March 1939, p.5 & Proceedings of the Royal Zoological Society of NSW, 1938-39, Vol. 59, p.23], HBZ 28 [*The Daily Telegraph* (Sydney) 8/4/1927, p.1], ZSL 11 [Chalmers Mitchell, 1904], ZSL 18 [Protheroe, 1909], ZSL 20 [*Illustrated London News*, 27<sup>th</sup> March 1926, p.24], NZW 3 [*Washington Post*, 1903] & NZW 4 [*Nature, A Weekly Illustrated Journal of Science*, 1904]). The majority of these images have been extensively cropped or retouched prior to publication. Such modifications are denoted by the letters “C” (cropped in publication) or “R” (retouched in publication) in the “PP” (post-production) column in Tables 1-4.

There are 18 sets (series)<sup>77</sup> of images within the TIR that are known to have been taken together on the same day, or within a comparatively short time of each other. These series are identified in the TIR tables in blue, with boxed outlines (Appendix I, Tables 1-4). The three Hobart Zoo images credited to H. J. King (Appendix II, HBZ 2, 6, 23) may possibly constitute an 19<sup>th</sup> series, but are presently not shown as such in Table 2 due to the contested attribution of HBZ 23. The oldest of the series are the five Tucker photographs taken at the Beaumaris Zoo on the 27<sup>th</sup> September 1911 (Appendix II, Images: MRB 17-21). The five 1912 Burrell (Appendix II, Images: MRB 24-28), and six 1933 Fleay photographs (Appendix II, Images: HBZ 11-16) are undoubtedly the most recognisable of the image series.

The image quality within the TIR varies from excellent to poor. Of the 112 photographs, 69 (62%) have been graded excellent, 30 (27%) good and 13 (12%) poor. Many of the lower grade images reflect the camera technology of the time, with slower shutter speeds and poor lighting tending to produce a higher proportion of dark, blurred, or out-of-focus images. Of the images graded “poor”, two are pixelated newsprint (Appendix II, Images: HBZ 28 &

NZW 3) and one sustained damage following rescue from a fire (Appendix II, Image: HBZ 8).

The majority of photographs within the TIR are of a single Thylacine [83] (74%), with 18 (16%) showing two specimens, 6 (5%) showing three specimens, and 5 (4%) showing four specimens as a family group (mother and pups).

## Retouched & Cropped Images

Retouched photographs are altered post-production to compensate for perceived failings in the original image, in which shadows are removed, contrast adjusted, blurred outlines defined, light / dark balance corrected and selected features enhanced to improve the overall appearance of the image. There are five examples within the TIR where the images are known to have been retouched (Appendix II, Images: HBZ 18, RPM 1, RPM 2, ZSL 18 & ZSL 20). Cropping and horizontal flipping of images can occasionally give the false impression that the image is previously unseen. A good example is a photograph reproduced in Guiler & Godard (1998, p.173), Moeller (1997, p.25) and Paddle (2000, p.206) of a seated Thylacine at the Hobart Zoo. In reality, this image is a flipped and cropped still from Fleay’s 1933 motion picture footage of the Kaine Thylacine.

## Coloured Images

There are no known colour images of the Thylacine, but original sepia versions of some of the photographs do exist. Sepia toning is not, as is often thought, a consequence of natural ageing, but was originally developed to improve the appearance of the image. In addition, the chemical processes involved in the photograph’s production also increased its longevity. Any historical Thylacine photographs that appear in publication containing *non-sepia* colours, have been artificially colourised.

## TIR Exclusions

Technically, many of the published photographs of the Thylacine are not “true” photographs, but selected stills from one of the nine surviving motion picture films. Two other films are known to have existed, the Randall Stewart film and that of the Mullins family group, but both are now feared lost. With the singular exception of the two surviving stills from the lost 1931 Randall Stewart film of the Kaine specimen at the Hobart Zoo (Sleightholme, Gordon & Campbell, 2019) (Appendix II, HBZ 26 & 27), motion picture stills have been excluded from the TIR.

## Solving age-old debates

The importance of the photographic record in solving age-old debates regarding the species can best be illustrated by example. Until 2011, the sex of the last known captive Thylacine was hotly debated, with some researchers

<sup>77</sup> MRB 5-6, 8 & 32, 15-21, 24-28; HBZ 11-16, 18-19, 26-27; WKL 2-3, 6-8, 11-12; JHW 1-2; RPM 1-2; MPS 1-2; ZSL 3-5, 12-13, 17-18, 21-22; NYZ 1-3.



arguing that it was a male, and others, that it was a female. It was only through the detailed examination of a single frame of Fleay's movie footage that the debate was finally resolved. The last captive specimen was unquestionably a male with a clearly visible scrotum (Sleightholme, 2011).

## Human Interactions

There are 13 images within the TIR that feature human subjects interacting with living Thylacines (Appendix II, Images: MRB 1, 8, 14, 16-21; HBZ 2, 10, 22 & ZSL 1). Undoubtedly, the most endearing of these images is that by Herbert John King of a young boy at the Hobart Zoo peering through the enclosure fence at the Kaine specimen (Appendix II, Image: HBZ 23).

## Conclusion

With the Thylacine now officially classified as extinct<sup>78</sup>, its photographic legacy serves as a permanent reminder of the fragility of island populations and the relative ease with which, through misguided judgments, they can be destroyed. Consequently, every surviving photograph takes on a new level of importance. Each of the images tells its own unique story, and collectively they constitute an irreplaceable part of our natural heritage. It is therefore vital that these photographs are properly conserved and catalogued, and for the purpose of ongoing research, that the photographic record we have of the species is accurate. With the publication of the TIR, we feel we have gone some way to fulfilling that criterion.

## Photograph Appeal

Over the last decade, a total of 12 previously unknown photographs of the Thylacine have been rediscovered (Appendix II, Images: MRB 14, 22, 30, 32; HBZ 19, 24; ZSL 1, 21, 22; MFG 2; WKL 6, 10), the most recent of which is a photograph of the Tyenna male taken through the wire fence of its enclosure at the Beaumaris Zoo [MRB 32], dating to c1913. The newly discovered photograph was brought to the attention of the authors in August 2020 by a member of the Tasmanian Tiger Archives [TTA] (Williams, pers. com., 7/8/2020 & 8/8/2020) who requested confirmation that the image was unknown. We were delighted to be able to confirm the TTA's suspicion that the image was indeed new. Further investigation revealed that the photograph was purchased together with two other known Thylacine images by a Mr. D. Vrettos (now deceased) from Hind Sight Photo Cards in the Salamanca Market (Hobart) some 20 years ago. Unfortunately, the identity of the photographer of MRB 32 is a mystery, but it is likely to be the same individual who captured image MRB 8,

thus taking the series total to 18. The newly discovered photograph is believed to be a copy of the original, the present-day whereabouts of which is unknown. There are undoubtedly other Thylacine photographs waiting to be discovered, so if a reader knows of a photograph that has not been included in the TIR, the authors would be obliged if this could be brought to their attention, so that it may be included in any future revision.

## Conservation

Photographs, by their very nature, are susceptible to damage from a number of everyday factors such as excessive handling, temperature, humidity, exposure to light, pollution, mold growth and damage from insects. The authors would advise any member of the public who owns an original photograph to seek conservation advice from their local museum, to safeguard the image's long-term survival.

## Addendum

Just prior to publication, the authors received notification from the research team of Linnard, Williams & Holmes<sup>79</sup>, of a further photographic find in a private Tasmanian collection (Linnard, pers. com. 16/8/20), taking the running total of known Thylacine images to 113.

This latest photograph [HBZ 29] (Fig. 1) was taken at the Hobart Zoo in 1928 by the present owner's aunt. The Thylacine can be readily identified by the foreshortened tail and distended pouch as the *Porteus* female<sup>80</sup>. This female arrived at the zoo in January 1928 with two pouch young. She remained on display at the zoo until her death on the 1st November 1929. As a last-minute inclusion, this image does not feature in the preceding TIR analysis or in Appendix I (Table 2). The image has been provisionally graded poor due to the grainy nature of the exposure and given the dating prefix YDO, as only the year date is currently known.



**Figure 1.** Image HBZ 29. Photo courtesy: Tasmanian Tiger Archives Group.

<sup>78</sup> The species is now listed as extinct under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), and under the International Union for Conservation of Nature (IUCN) Red List (Burbidge & Woinarski, 2016). The thylacine was delisted from CITES Appendix I in accordance with Resolution Conf. 9.24 (Rev. CoP15) in March 2013.

<sup>79</sup> Tasmanian Tiger Archives Group.

<sup>80</sup> Paddle identifier HBT xxi.

## Acknowledgements

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## APPENDIX I - Table I

## Tasmania

Zoo	Prefix	Number	Image Description	Date Format	Date	Paddle Identifier(s)	Photographer	Collection Reference	PP	Series	Condition	Thylacines
Beaumaris (Sandy Bay)	MRB	1	O'May Thylacine (subdued and collared) with keeper Charlie Newman photographed on the day of its arrival	PDK	17th June 1916	MRB xiii	Unknown	TMAG: Q5405		No	Excellent	1
Beaumaris (Sandy Bay)	MRB	2	Resting O'May male with the tail of a second Thylacine (Foy or Bourke specimen) to the right of the frame	YDO	1916	MRB xiii / (MRB xi or MRB xii)	H.J. King (QVM attrib.)	QVM: 1983.P1942		No	Excellent	2
Beaumaris (Sandy Bay)	MRB	3	Tyenna male in motion in front of trellis fence	KPD	(12/8/1911 - 9/3/1915)	MRB viii	Dr: G. Oxe	NAA: A1861,7550		No	Good	1
Beaumaris (Sandy Bay)	MRB	4	Woolnorth female (far right) and her three pups photographed shortly after arrival	PDU	(July) 1909	MRB iii-vi	W.Williamson	TMAG: Q12804 or Q4443?		No	Excellent	4
Beaumaris (Sandy Bay)	MRB	5	Woolnorth female (centre) and her three pups photographed 6 months after their arrival	PDU	(January) 1910	MRB iii-vi	W.Williamson	TMAG: Q4446.1 & AOT: NS463/5/2		1 of 2	Excellent	4
Beaumaris (Sandy Bay)	MRB	6	Woolnorth female (far right) and her three pups photographed 6 months after their arrival	PDU	(January) 1910	MRB iii-vi	W.Williamson	Original photograph no longer exists. Copy appeared in publication	C	2 of 2	Excellent	4
Beaumaris (Sandy Bay)	MRB	7	Two of the Woolnorth pups photographed shortly after their arrival	PDU	(July) 1909	MRB iv or v or vi	W.Williamson	Original photograph no longer exists. Copy appeared in publication	C	No	Poor	2
Beaumaris (Sandy Bay)	MRB	8	Tyenna male at fence of enclosure looking at a crouching Charlie Newman (keeper)	YDO	1913	MRB viii	Unknown	AOT: PH30/1/6817		1 of 2	Good	1
Beaumaris (Sandy Bay)	MRB	9	Tyenna male on arrival within grassed enclosure	PDU	(August) 1911	MRB viii	W.Williamson	TMAG: Q4442		No	Excellent	1
Beaumaris (Sandy Bay)	MRB	10	Reclining Thylacine within its enclosure (probably the Bourke specimen)	PMU	(January - April) 1917	(MRB xi)	D. O. Park	TMAG: Q4449		No	Excellent	1



## APPENDIX I - Table I

Zoo	Prefix	Number	Image Description	Date Format	Date	Paddle Identifier(s)	Photographer	Collection Reference	PP	Series	Condition	Thylacines
Beaumaris (Sandy Bay)	MRB	11	Tyenna male (rear) with the Woolnorth female (centre) and her male pup (front) within their enclosure	PDU	(September 1911)	MRB viii / MRB iii / MRB vi	(H. Tucker)	TMAG: Q4448	No	No	Excellent	3
Beaumaris (Sandy Bay)	MRB	12	Tyenna male in the corner of its enclosure in front of trellis fence sniffing at the ground	PMU	(August - December 1911)	MRB viii	Unknown	TMAG: Q4447	No	No	Good	1
Beaumaris (Sandy Bay)	MRB	13	Juvenile Thylacine (possibly Foy specimen) with head bowed and the tail of another Thylacine exiting the frame on the left	PMU	(July - December 1916)	(MRB xii)	Unknown	Private Collection (Moeller)	No	No	Excellent	2
Beaumaris (Sandy Bay)	MRB	14	Tyenna male standing on its hind legs against enclosure fence with Charlie Newman (keeper)	PMU	(August - December 1911)	MRB viii	(M. Strickland / H. Tucker)	TMAG: Q4445	No	No	Excellent	1
Beaumaris (Sandy Bay)	MRB	15	Tyenna male with juvenile male from the Woolnorth family group (in profile) staring through the enclosure fence	PMU	(Sep - Nov 1911)	MRB viii / MRB vi	H. Tucker	TMAG: Q12803	1 of 7	1 of 7	Excellent	2
Beaumaris (Sandy Bay)	MRB	16	Tyenna male with juvenile male from the Woolnorth family group looking through enclosure fence at Mrs. Roberts (kneeling)	PMU	(Sep - Nov 1911)	MRB viii / MRB vi	H. Tucker	TMAG: Q4444.1	2 of 7	2 of 7	Excellent	2
Beaumaris (Sandy Bay)	MRB	17	Tyenna male tugging joint of meat from Mrs. Roberts' hand with keeper outside of gate	PDK	27th September 1911	MRB viii	H. Tucker	TMAG: Q4440.2	3 of 7	3 of 7	Good	1
Beaumaris (Sandy Bay)	MRB	18	Tyenna male feeding with keeper outside of gate	PDK	27th September 1911	MRB viii	H. Tucker	TMAG: Q4440.3	4 of 7	4 of 7	Good	1
Beaumaris (Sandy Bay)	MRB	19	Tyenna male and juvenile male from the Woolnorth family group in enclosure with Mrs. Roberts viewing through fence	PDK	27th September 1911	MRB viii / MRB vi	H. Tucker	TMAG: Q4440.4	5 of 7	5 of 7	Good	2
Beaumaris (Sandy Bay)	MRB	20	Tyenna male feeding with Mrs. Roberts viewing through enclosure fence	PDK	27th September 1911	MRB viii	H. Tucker	TMAG: Q4440.5	6 of 7	6 of 7	Good	1

## APPENDIX I - Table I

Zoo	Prefix	Number	Image Description	Date Format	Date	Paddle Identifier(s)	Photographer	Collection Reference	PP	Series	Condition	Thylacines
Beaumaris (Sandy Bay)	MRB	21	Tyenna male feeding from Mrs. Roberts' hand with with juvenile Woolnorth male and keeper in frame	PDK	27th September 1911	MRB viii / MRB vi	H. Tucker	TMAG: Q4440.6		7 of 7	Good	2
Beaumaris (Sandy Bay)	MRB	22	Two resting female Thylacines (Bourke and Foy specimens).	PDK	17th June 1916	MRB xi & MRB xii	Unknown	TMAG: Q444.2		No	Excellent	2
Beaumaris (Sandy Bay)	MRB	23	Two resting Thylacines (Foy male and O'May female)	PMU	(January - February) 1918	MRB xii & MRB xiii	Rev. G. H. Judd	Private Collection (Sleightholme)		No	Excellent	2
Beaumaris (Sandy Bay)	MRB	24	Tyenna male carrying dead chicken	PDU	(August) 1912	MRB viii	H. J. Burrell	AMS:V8221		1 of 5	Excellent	1
Beaumaris (Sandy Bay)	MRB	25	Tyenna male eating dead chicken	PDU	(August) 1912	MRB viii	H. J. Burrell	AMS:V8222		2 of 5	Excellent	1
Beaumaris (Sandy Bay)	MRB	26	Tyenna male with head turned with dead chicken on ground	PDU	(August) 1912	MRB viii	H. J. Burrell	AMS:V8225		3 of 5	Excellent	1
Beaumaris (Sandy Bay)	MRB	27	Tyenna male with head raised sniffing the air	PDU	(August) 1912	MRB viii	H. J. Burrell	AMS:V8226		4 of 5	Excellent	1
Beaumaris (Sandy Bay)	MRB	28	Tyenna male in classic profile	PDU	(August) 1912	MRB viii	H. J. Burrell	AMS:V8227		5 of 5	Excellent	1
Beaumaris (Sandy Bay)	MRB	29	Tyenna male in profile within enclosure	PMU	(August - December) 1911	MRB viii	W. Williamson	Unknown		No	Good	1
Beaumaris (Sandy Bay)	MRB	30	Thylacine walking towards camera	NYD	Unknown	Unknown	Unknown	Private Collection (Moeller)	C R	No	Poor	1
Beaumaris (Sandy Bay)	MRB	31	Two Thylacines (Tyenna male & Woolnorth female) investigating the corner of their enclosure	PMU	(August - December) 1911	MRB viii / MRB iii	Unknown	Unknown		No	Poor	2
Beaumaris (Sandy Bay)	MRB	32	Tyenna male staring through enclosure fence. Photo taken from outside of the enclosure.	YDO	1913	MRB viii	Unknown	Private Collection (Pringle)		2 of 2	Excellent	1

## APPENDIX I - Table 2

## Tasmania

Zoo	Prefix	Number	Image Description	Date Format	Date	Paddle Identifier(s)	Photographer	Collection Reference	PP	Series	Condition	Thylacines
Hobart (Domain)	HBZ	1	The now aged Kaine Thylacine in profile standing at enclosure fence	PDU	(May) 1936	HBT xxx	B. Sheppard	AOT: NS1298-1-1880	No	No	Excellent	1
Hobart (Domain)	HBZ	2	Kaine Thylacine looking at dog held against enclosure fence by Arthur Reid (Zoo Superintendent)	YDO	1933	HBT xxx	H. J. King (Paddle attrib.)	AMS: 139/4/20/1	No	No	Excellent	1
Hobart (Domain)	HBZ	3	Kaine Thylacine in profile within enclosure (produced as post card)	YDO	1935	HBT xxx	J. Chandler	AOT: NS434/1/63	No	No	Poor	1
Hobart (Domain)	HBZ	4	Group of three Thylacines in their enclosure with the Mullins female (with amputated foot) on the left of frame	PMU	(January - March) 1928	HBT v, viii & (either xxi or xxv).	Unknown	QVM: 1993.P3505	No	No	Poor	3
Hobart (Domain)	HBZ	5	Resting Thylacine basking in the sun	NYD	Unknown	HBT (not yet determinable)	Unknown	Private Collection (Moeller)	No	No	Good	1
Hobart (Domain)	HBZ	6	Kaine Thylacine basking in the sun against enclosure fence	YDO	1933	HBT xxx	H. J. King	QVM: 1983.P1943	No	No	Excellent	1
Hobart (Domain)	HBZ	7	Porteus pouch-gravid female in profile within enclosure	PDU	(June) 1928	HBT xxi	S. W. Jackson	TMAG: Q12843	No	No	Good	1
Hobart (Domain)	HBZ	8	Two Thylacines in their enclosure (fire-damaged exposure)	YDO	1928	HBT viii & (either xxi or xxv)	Unknown (possibly R. Forward Griffith attrib.)	QVM: 1993.9.P3508	No	No	Poor	2
Hobart (Domain)	HBZ	9	Three Thylacines (Mullins female with amputated foot on the right) walking in group along perimeter fence of enclosure	KPD	(February 1926 - March 1928)	HBT v, viii & (either xvii or xix).	Unknown	Unknown	No	No	Excellent	3
Hobart (Domain)	HBZ	10	Three Thylacines (Mullins female with amputated foot on the left) with Arthur Reid (Zoo Superintendent) in background	PMU	(January - March) 1928	HBT v, viii & (either xxi or xxv).	M. S. R. Sharland	Unknown	No	No	Good	3

## APPENDIX I - Table 2

Zoo	Prefix	Number	Image Description	Date Format	Date	Paddle Identifier(s)	Photographer	Collection Reference	PP	Series	Condition	Thylacines
Hobart (Domain)	HBZ	11	Kaine Thylacine face-on view	PDK	19th December 1933	HBT xxx	Dr: D. H. Fleay	David Fleay Trustees		1 of 6	Excellent	1
Hobart (Domain)	HBZ	12	Kaine Thylacine in left profile with jaws agape	PDK	19th December 1933	HBT xxx	Dr: D. H. Fleay	David Fleay Trustees		2 of 6	Excellent	1
Hobart (Domain)	HBZ	13	Kaine Thylacine in right profile within enclosure (sepia)	PDK	19th December 1933	HBT xxx	Dr: D. H. Fleay	David Fleay Trustees		3 of 6	Excellent	1
Hobart (Domain)	HBZ	14	Kaine Thylacine in left profile with head turning away from camera	PDK	19th December 1933	HBT xxx	Dr: D. H. Fleay	David Fleay Trustees		4 of 6	Excellent	1
Hobart (Domain)	HBZ	15	Kaine Thylacine in right profile within enclosure	PDK	19th December 1933	HBT xxx	Dr: D. H. Fleay	David Fleay Trustees		5 of 6	Excellent	1
Hobart (Domain)	HBZ	16	Kaine Thylacine in left profile with jaws agape	PDK	19th December 1933	HBT xxx	Dr: D. H. Fleay	David Fleay Trustees		6 of 6	Excellent	1
Hobart (Domain)	HBZ	17	Thylacine in enclosure with head turned to the right	NYD	Unknown	HBT (not yet determinable)	Unknown	Unknown	C	No	Poor	1
Hobart (Domain)	HBZ	18	Mullins now adult female pup facing camera	PDU	(January) 1928	HBT viii	A. F. Bassett Hull	Proceedings Royal Zoological Society of NSW, Vol 59, p.23	C	1 of 2	Poor	1
Hobart (Domain)	HBZ	19	Porteus pouch-gravid female with Mullins female and her now adult female pup	PDU	(January) 1928	HBT xxi, v, viii	A. F. Bassett Hull	Australian Museum, Sharland Archive, Box 86 [AMS: 230-81a]		2 of 2	Poor	3
Hobart (Domain)	HBZ	20	Thylacine directly facing camera with another Thylacine's foot exiting image to the left	YDO	1928	(HBT viii)	Selby	Private Collection (Edwards)		No	Good	2



## APPENDIX I - Table 2

Zoo	Prefix	Number	Image Description	Date Format	Date	Paddle Identifier(s)	Photographer	Collection Reference	PP	Series	Condition	Thylacines
Hobart (Domain)	HBZ	21	Three Thylacines resting in a heap in the middle of their enclosure	PMU	(January - March) 1928	HBT v, viii & (either xxi or xxv).	Unknown	Unknown	No	No	Good	3
Hobart (Domain)	HBZ	22	Thylacine (probably Kaine specimen) in corner of enclosure	KPD	(1931-1936)	(HBT xxx)	L. C. Pitfield	TMAG: Q1987.429.1	No	No	Poor	1
Hobart (Domain)	HBZ	23	Kaine Thylacine with young boy on opposite side of enclosure fence	YDO	1933	HBT xxx	H. J. King (QVMAG attrib.) or R. Davis (AOT attrib.)	AOT: NS1377/1/59 - (QVM: 1983.P1944) copy	No	No	Excellent	1
Hobart (Domain)	HBZ	24	Two Thylacines in enclosure - male with jaws agape	PMU	(April - August) 1924	HBT iv & (either ix or xii)	Unknown	Private Collection (Warnecke)	No	No	Excellent	2
Hobart (Domain)	HBZ	25	Porteus pouch-gravid female in enclosure	YDO	1928	HBT xxi	Unknown	BMNH (London)	No	No	Good	1
Hobart (Domain)	HBZ	26	Kaine Thylacine in its enclosure photographed shortly after arrival at the zoo (still from lost film)	PDU	(April) 1931	HBT xxx	Dr. R. A. Stewart	The Mercury newspaper 13/7/1978	1 of 2	Good	Good	1
Hobart (Domain)	HBZ	27	Kaine Thylacine in its enclosure photographed shortly after arrival at the zoo (still from lost film)	PDU	(April) 1931	HBT xxx	Dr. R. A. Stewart	The Mercury newspaper 13/7/1978	2 of 2	Good	Good	1
Hobart (Domain)	HBZ	28	Mullins female to the left with her now adult female pup eating meat within their enclosure	PDU	(April) 1927	HBT v and viii	Unknown	The Daily Telegraph (Sydney) 8/4/1927, p.1	C	No	Poor	2

## APPENDIX I - Table 3

## Wild Kills

Location	Prefix	Number	Image Description	Date Format	Date	Paddle Identifier(s)	Photographer	Collection Reference	PP	Series	Condition	Thylacines
Hobart	WKL	1	Trophy photograph of hoisted dead Thylacine with a Mr. Weaver	YDO	1869	N/A	(V.A. Prout)	TMAG: Q10661		No	Excellent	1
Fitzgerald	WKL	2	Albert Quarrell standing holding dead Thylacine	PDU	(December) 1911	N/A	C. Brown	TMAG: Q8777.1		1 of 2	Excellent	1
Fitzgerald	WKL	3	Albert Quarrell with his dog seated holding dead Thylacine	PDU	(December) 1911	N/A	C. Brown	QVM: 1993.P3506 & TMAG: Q8777.2		2 of 2	Excellent	1
North Bischoff Valley	WKL	4	Dead Thylacine being held by rear legs by Mr. Clem Penny (right) and one other	PDK	5th January 1924	N/A	J. H. Robinson	TMAG: Q8147 & QVM: 2013.P0502 & AOT: 30/6303		No	Excellent	1
Waratah	WKL	5	Two dead Thylacines hanging outside hunting cabin near Waratah	YDO	1901	N/A	A. E. Warde	Private Collection (Calaby)		No	Excellent	2
Mawbanna	WKL	6	Wif Batty and his dog with last wild-killed Thylacine plus background detail	PDK	6th May 1930	N/A	P. O'Halloran	Private Collection (Hurst)		1 of 2	Excellent	1
Mawbanna	WKL	7	Wif Batty and his dog with last wild-killed Thylacine	PDK	6th May 1930	N/A	P. O'Halloran	TMAG: Q8152 & QVM: 1993.P3500		2 of 2	Excellent	1
Mawbanna	WKL	8	Dying Batty Thylacine on woodchip pile	PDK	6th May 1930	N/A	Mr Lily	Private Collection (Casey) & (QVM: 1993.P3509)		No	Good	1
Mawbanna	WKL	9	Dead Batty Thylacine on woodchip pile	PDK	6th May 1930	N/A	Unknown	QVM: 1983.P1946		No	Good	1
Mawbanna	WKL	10	Dying Batty Thylacine on woodchip pile (still standing)	PDK	6th May 1930	N/A	Unknown	Private Collection (Unknown)		No	Good	1
Unknown	WKL	11	Dead Thylacine curled with head on rump	NYD	(1920s)	N/A	Unknown	TMAG: Q563 & AOT: 30/1/92.10		1 of 2	Excellent	1
Unknown	WKL	12	Dead Thylacine with head over feet	NYD	(1920s)	N/A	Unknown	TMAG: Q564		2 of 2	Excellent	1

## APPENDIX I - Table 3

## Other

Location	Prefix	Number	Image Description	Date	Paddle Identifier(s)	Photographer	Collection Reference	Series	Condition	Thylacines
Wynyard	JHW	1	Standing Thylacine (Bourke specimen) in holding pen at James Harrison Dealership (Wynyard)	PDU (October) 1915	MRB xi	M. B. Sargent	QVM: 1993.P3512 & AOT: NS351/27	1 of 2	Excellent	1
Wynyard	JHW	2	Resting Thylacine (Bourke specimen) in holding pen at James Harrison Dealership (Wynyard)	PDU (October) 1915	MRB xi	M. B. Sargent	QVM: 1993.P3513 & TMAG: Q4453 & AOT: NS351/26	2 of 2	Excellent	1

Bicheno	MFG	1	Mullins family group in cart at Bicheno country show resting	YDO 1923	HBZ v, vi, vii, viii	H. J. King	QVM: 1983.P1941	No	Excellent	4
Bicheno	MFG	2	Mullins family group in cart at Bicheno country show with female displaying defensive gape	YDO 1923	HBZ v, vi, vii, viii	Unknown (but possibly Mullins himself)	Private Collection (Lewis)	No	Excellent	4

## Mainland

Zoo	Prefix	Number	Image Description	Date	Paddle Identifier(s)	Photographer	Collection Reference	Series	Condition	Thylacines
Royal Park (Melbourne)	RPM	1	Thylacine within enclosure (right-facing)	YDO 1905	(RPM xxxiii or xxxvi)	J. B. Lane	Le Souef Family Archive, State Library of Victoria, Ref: YMS 13490, Box 32, Plate 115	R 1 of 2	Good	1
Royal Park (Melbourne)	RPM	2	Thylacine within enclosure (left-facing)	YDO 1905	(RPM xxxiii or xxxvi)	J. B. Lane	Le Souef Family Archives (University of Melbourne)	R 2 of 2	Good	1

## APPENDIX I - Table 3

Zoo	Prefix	Number	Image Description	Date	Paddle Identifier(s)	Photographer	Collection Reference	Series	Condition	Thylacines
Taronga (Sydney)	TZS	1	Thylacine (O'May specimen) pacing the perimeter of its enclosure	YDO 1922	TZS I	G. P. Whitley	Australian Museum archives: series 139/4, item 20.	No	Excellent	1
Moore Park (Sydney)	MPS	1	Thylacine (Stevenson specimen) within white walled enclosure (left-facing)	KPD (1903-1905)	Originally MPS ii revised (Sleightholme & Campbell, 2016) to MPS iv	H. J. Burrell	Australian Museum archives ref:V8223	1 of 2	Good	1
Moore Park (Sydney)	MPS	2	Thylacine (Stevenson specimen) within white walled enclosure (left-facing static)	KPD (1903-1905)	Originally MPS ii revised (Sleightholme & Campbell, 2016) to MPS iv	H. J. Burrell	Australian Museum archives ref:V8223	2 of 2	Good	1



## APPENDIX I - Table 4

International													
Zoo	Prefix	Number	Image Description	Enclosure	Date Format	Date	Paddle Identifier(s)	Photographer	Collection Reference	PP	Series	Condition	Thylacines
Regents Park (London)	ZSL	1	Thylacine crouching in its water trough within its enclosure (lantern slide & stereo view)*	Kangaroo Sheds	PMU	(July-August) 1864	ZSL v	F. Haes	Private Collection (Sleightholme)		No	Excellent	1
Regents Park (London)	ZSL	2	Thylacine looking through enclosure fence above water trough	Kangaroo Sheds	PDU	(August) 1904	ZSL xv	G. Renshaw	Zoological Society of London		No	Good	1
Regents Park (London)	ZSL	3	Adult Thylacine in right-facing profile within enclosure	Lemur House	KPD	(1910-1914)	ZSL xvii	W.S. Berridge	Zoological Society of London		1 of 3	Excellent	1
Regents Park (London)	ZSL	4	Adult Thylacine in right-facing profile by doorway within enclosure	Lemur House	KPD	(1910-1914)	ZSL xviii	W.S. Berridge	Zoological Society of London		2 of 3	Excellent	1
Regents Park (London)	ZSL	5	Adult Thylacine in left-facing profile within enclosure	Lemur House	KPD	(1910-1914)	ZSL xviii	W.S. Berridge	Zoological Society of London		3 of 3	Excellent	1
Regents Park (London)	ZSL	6	Female Thylacine sniffing the ground	Lemur House	YDO	1910	ZSL xvi	W.S. Berridge	Zoological Society of London		Possibly	Excellent	1
Regents Park (London)	ZSL	7	Juvenile male Thylacine with erect tail	Lemur House	YDO	1910	ZSLxvii	W.S. Berridge	Zoological Society of London		Possibly	Excellent	1
Regents Park (London)	ZSL	8	Female Thylacine in crouching profile looking through enclosure fence	Lemur House	YDO	1910	ZSL xvi	W.S. Berridge	Zoological Society of London		Possibly	Excellent	1
Regents Park (London)	ZSL	9	Thylacine at water trough sniffing the air	Kangaroo Sheds	YDO	1902	ZSL xv	W.P.Dando	Zoological Society of London		No	Good	1
Regents Park (London)	ZSL	10	Thylacine standing on hind legs at night enclosure door	Kangaroo Sheds	YDO	1903	ZSL xv	W.P.Dando	Zoological Society of London		No	Excellent	1
Regents Park (London)	ZSL	11	Thylacine in right-facing profile staring through enclosure fence	Kangaroo Sheds	YDO	1904	ZSL xv	W.P.Dando	Zoological Society of London	C R	No	Poor	1

## APPENDIX I - Table 4

Zoo	Prefix	Number	Image Description	Enclosure	Date Format	Date	Paddle Identifier(s)	Photographer	Collection Reference	PP	Series	Condition	Thylacines
Regents Park (London)	ZSL	12	Thylacine in left-facing profile with the head of another entering frame from behind	Lemur House	YDO	1914	ZSL xviii + head of unidentified other (probably ZSL xvi)	D. Seth Smith	Zoological Society of London		1 of 2	Excellent	2
Regents Park (London)	ZSL	13	Thylacine in right-facing profile	Lemur House	YDO	1914	ZSL xvii	D. Seth Smith	Zoological Society of London		2 of 2	Excellent	1
Regents Park (London)	ZSL	14	London Zoo's last Thylacine in winter coat with jaws agape **	North Mammal House	YDO	1926	ZSL xx	F.W. Bond	Zoological Society of London		No	Excellent	1
Regents Park (London)	ZSL	15	Thylacine with injured right foreleg with jaws agape	Lemur House	PDU	(April) 1914	ZSL xviii	F.W. Bond	Zoological Society of London		No	Excellent	1
Regents Park (London)	ZSL	16	Thylacine in front of wooden enclosure fence	Lemur House	PDU	(May) 1913	ZSL xvii	F.W. Bond	Zoological Society of London		No	Excellent	1
Regents Park (London)	ZSL	17	Thylacine with head bowed near enclosure fence	Kangaroo Sheds	YDO	1902	ZSL xiv	L. Medland	Zoological Society of London		1 of 2	Excellent	1
Regents Park (London)	ZSL	18	Thylacine with jaws agape in front of night enclosure door	Kangaroo Sheds	YDO	1902	ZSL xiv	L. Medland	Zoological Society of London	C R	2 of 2	Good	1
Regents Park (London)	ZSL	19	Female Thylacine with open mouth and head bowed	Lemur House	YDO	1910	ZSL xvi	Unknown (possibly Berridge)	Zoological Society of London		No	Excellent	1
Regents Park (London)	ZSL	20	Thylacine in right-facing profile with open mouthed head to camera ***	North Mammal House	PDU	(March) 1926	ZSL xx	Unknown	Illustrated London News, 27/3/1926, p.24	C R	No	Good	1
Regents Park (London)	ZSL	21	Thylacine photographed from outside of the enclosure pacing the fence (lantern slide)	Lemur House	PMU	(Jan-Apr) 1910	ZSL xvi	Unknown	Private Collection (Sleightholme)		1 of 2	Excellent	1
Regents Park (London)	ZSL	22	Thylacine photographed from outside of the enclosure looking through fence (lantern slide)	Lemur House	PMU	(Jan-Apr) 1910	ZSL xvi	Unknown	Private Collection (Sleightholme)		2 of 2	Excellent	1

## APPENDIX I - Table 4

Zoo	Prefix	Number	Image Description	Enclosure	Date Format	Date	Paddle Identifier(s)	Photographer	Collection Reference	PP	Series	Condition	Thylacines
Berlin Zoological Garden	BZG	1	Male Thylacine in profile within barred cage	Carnivore House (Raubthiere)	YDO	1905	BRL iv	Unknown	Private Collection (Moeller)		No	Excellent	1
National Zoo (Washington, D.C.)	NZW	1	Two Thylacines standing on steps of night enclosure - one in profile and one facing camera	Lion House	YDO	1903	NZW i + NZW iii or NZW iv	E. J. Keller	Smithsonian Institution Archives, Record Unit 95, Box 49, Folder: 18		No	Excellent	2
National Zoo (Washington, D.C.)	NZW	2	Two Thylacines standing on steps of night enclosure facing each other	Lion House	YDO	1903	NZW i + NZW iii or NZW iv	Unknown	Smithsonian Institution Archives		No	Good	2
National Zoo (Washington, D.C.)	NZW	3	Resting Thylacine	Lion House	YDO	1903	NZW i	Unknown	Washington Post	C	No	Poor	1
National Zoo (Washington, D.C.)	NZW	4	Thylacine in profile beside tree stump	Lion House	YDO	1904	(NZW v)	H. F. Osborn	Nature, A Weekly Illustrated Journal of Science, 1904	C	No	Good	1
National Zoo (Washington, D.C.)	NZW	5	Thylacine in motion	Lion House	KPD	(1904-1909)	(NZW iii or NZW iv or NZW v)	H. Lang	AMNH Identifier (ppc_532_b07_f107_111)	C R	No	Excellent	1
Bronx Zoo (New York)	NYZ	1	Thylacine in right-facing profile at enclosure fence	Fox Dens	YDO	1903	NYZ i	E. R. Sanborn	NYZS / Wildlife Conservation Society (Bronx Zoo)		I of 3	Excellent	1

# APPENDIX I - Table 4

Zoo	Prefix	Number	Image Description	Enclosure	Date Format	Date	Paddle Identifier(s)	Photographer	Collection Reference	PP	Series	Condition	Thylacines
Bronx Zoo (New York)	NYZ	2	Rear view of seated Thylacine with head turned to the right	Fox Dens	YDO	1903	NYZ i	E. R. Sanborn	NYZS / Wildlife Conservation Society (Bronx Zoo)		2 of 3	Excellent	1
Bronx Zoo (New York)	NYZ	3	Thylacine in right-facing profile tugging a cloth through enclosure fence	Fox Dens	YDO	1903	NYZ i	E. R. Sanborn	NYZS / Wildlife Conservation Society (Bronx Zoo)		3 of 3	Excellent	1

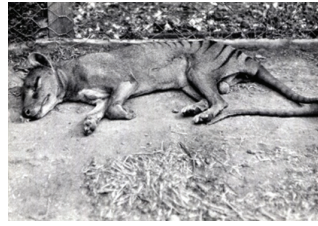
\* Earliest known photograph of a living Thylacine.

\*\* Last Thylacine to be displayed outside of Australia.





MRB 1



MRB 2



MRB 3



MRB 4



MRB 5



MRB 6



MRB 7



MRB 8



MRB 9



MRB 10



MRB 11



MRB 12



MRB 13



MRB 14



MRB 15



MRB 16



MRB 17



MRB 18



APPENDIX 2



MRB 19



MRB 20



MRB 21



MRB 22



MRB 23



MRB 24



MRB 25



MRB 26



MRB 27



MRB 28



MRB 29



MRB 30



MRB 31



MRB 32

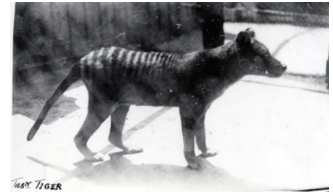
APPENDIX 2



HBZ 1



HBZ 2



HBZ 3



HBZ 4



HBZ 5



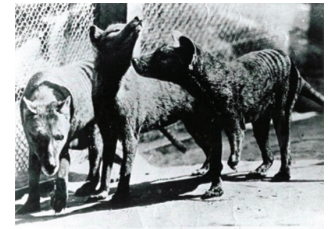
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HBZ 7



HBZ 8



HBZ 9



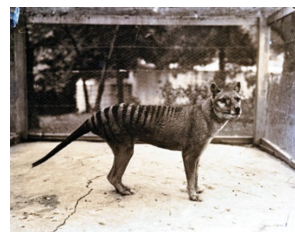
HBZ 10



HBZ 11



HBZ 12



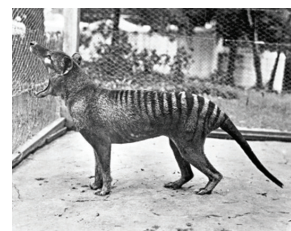
HBZ 13



HBZ 14



HBZ 15



HBZ 16



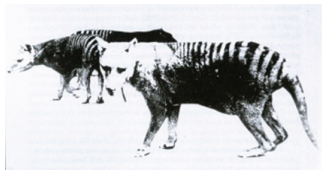
HBZ 17



HBZ 18



APPENDIX 2



HBZ 19



HBZ 20



HBZ 21



HBZ 22



HBZ 23



HBZ 24



HBZ 25



HBZ 26



HBZ 27



HBZ 28



WKL 2



WKL 3



WKL 4



WKL 5



WKL 6



WKL 7



APPENDIX I



WKL 8



WKL 9



WKL 10



WKL 11



WKL 12



JHW 1



JHW 1



JHW 2



MFG 1

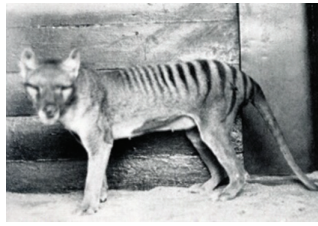


MFG 2

APPENDIX 2



RPM 1



RPM 2



TZS 1



MPS 1



MPS 2



ZSL 1



ZSL 2



ZSL 3



ZSL 4



ZSL 5



ZSL 6



ZSL 7



ZSL 8



ZSL 9



APPENDIX 2



ZSL 10



ZSL 11



ZSL 12



ZSL 13



ZSL 14



ZSL 15



ZSL 16



ZSL 17



ZSL 18



ZSL 19



ZSL 20



ZSL 21



ZSL 22



BZG 1

APPENDIX 2



NZW 1



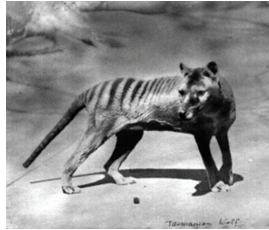
NZW 2



NZW 3



NZW 4



NZW 5



NYZ 1



NYZ 2



NYZ 3