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**To cite this article:** Darrell Lewis (2016) Comment on Welch's 'Thy Thylacoleo is a thylacine', Australian Archaeology, 80:40–47, Australian Archaeology, 82:1, 55-59, DOI: [10.1080/03122417.2016.1169583](https://doi.org/10.1080/03122417.2016.1169583)

**To link to this article:** <http://dx.doi.org/10.1080/03122417.2016.1169583>



Published online: 09 May 2016.



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COMMENT

## Comment on Welch's 'Thy *Thylacoleo* is a thylacine', *Australian Archaeology*, 80:40–47

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### ABSTRACT

In this paper, I review Welch's critique (*Australian Archaeology* 80:40–47) of claims by Akerman, Akerman and Willing and Woodhouse that depictions of *Thylacoleo* exist in Kimberley rock art. I agree with his conclusion that these claims are unfounded and that the depictions probably represent thylacines. There are, however, problems with the methodology he employs to reach this conclusion, a number of factual mistakes and a failure to adequately acknowledge the work of previous researchers. An appropriate methodology for identifying species in rock art, developed by a number of researchers in the 1970s and 1980s, is outlined.

### ARTICLE HISTORY

Accepted 21 March 2016

David Welch's rebuttal of the claims by Akerman (1998, 2009), Akerman and Willing (2009) and Woodhouse (2012) that particular Kimberley rock paintings could be representations of the long extinct *Thylacoleo carnifex* (marsupial lion) is timely. He provides many compelling arguments in support of his conclusion that instead of *Thylacoleo*, the paintings represent *Thylacinus cynocephalus* (the thylacine, or Tasmanian Tiger/Wolf), a conclusion with which I fully agree. His paper adds valuable information and insights into the problem of identifying thylacine depictions and differentiating them from other species in rock paintings.

In particular, Welch draws attention to sources of historical information about the brush on thylacine tails not previously referred to by other researchers. He disputes conflicting claims that the ears on thylacine depictions must be 'short, rounded' (Taçon et al. 2011:167), or 'sharply pointed' (Woodhouse 2012), by pointing out that the shape of the ears on living animals (viewed on historical film footage) depends on the angle at which they are observed. This is an observation which would apply to other species depicted in rock art. His paper also shows that the images in Akerman and Willing (2009) were distorted through the original photograph being taken at an oblique angle. This made the forepart of the depicted animal appear more robust than it actually is and may have contributed to Akerman and Willing's identification of the animal as *Thylacoleo*. Welch also

disputes—correctly in my opinion—that the front and rear paws have *Thylacoleo*-like claws, as Akerman and Willing assert.

Despite Welch's constructive critique of the *Thylacoleo* identifications, his paper has significant omissions that are important in the debate on the identification of extinct fauna in rock art—not least Bednarik's (2013) overview and rejection of more than a century of such claims, including the very same *Thylacoleo* claims being examined by Welch. All researchers stand on the shoulders of others and should acknowledge their debt by adequately and accurately citing relevant earlier work. I was disappointed to find factual mistakes in his paper and to see that Welch did not adequately situate his discussion in the academic discourse. In the following, I address various problems in the order that they appear in Welch's paper.

On page 41, Welch states that 'Difficulties associated with the recognition of thylacines and other species have been addressed by Clegg (1978)'. This is correct, but he fails to mention that the same 'difficulties' have been addressed, often much more successfully than Clegg, by researchers such as Brandl (1972, 1980), Wright (1972), Macintosh (1977), Murray and Chaloupka (1984), Rosenfeld (1982), Taçon et al. (2011) and Lewis (1977, 1986, 1988a). I summarised the work of Macintosh, Clegg, Brandl and Rosenfeld in my 1986 paper which was a critique of the claims by Murray and Chaloupka (1984) that particular Arnhem Land rock paintings

represent, or might represent, various megafauna species, including *Thylacoleo*. Murray and Chaloupka's paper, and my response to it, both present methodologies for identifying *Thylacoleo* and other species in rock art, and are therefore particularly relevant to Welch's critique. However, with respect to Murray and Chaloupka's paper, Welch only mentions the bald fact that they discuss *Thylacoleo* and that the two illustrations they suggest might represent *Thylacoleos* both have a tuft at the end of the tail. He does not refer to Murray and Chaloupka's paper, my response to their paper, or to anyone else's work for methodology.

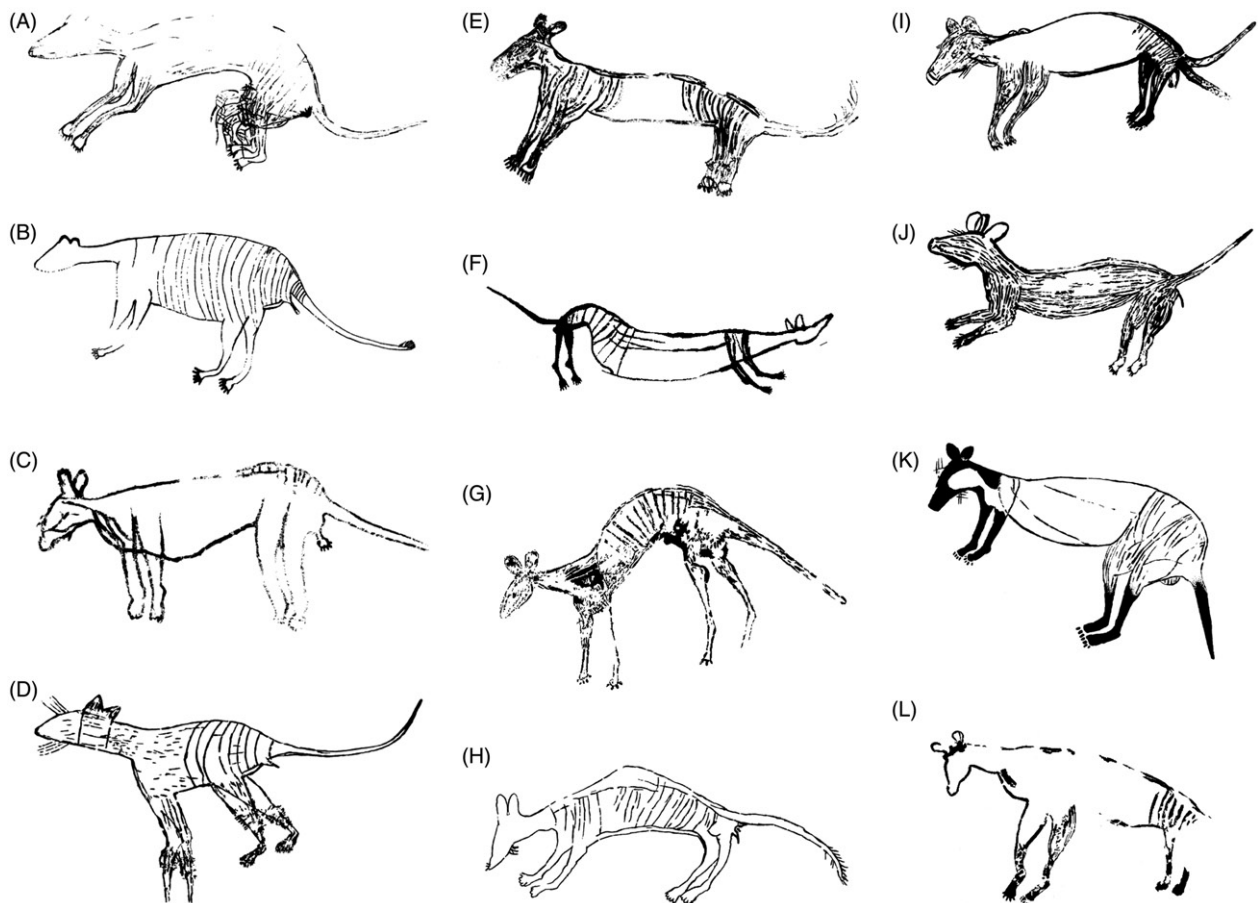
Still on page 41, Welch explains that in both Kimberley and Arnhem Land rock art, the body shapes of thylacines 'range from thin and attenuated to short and stocky, and from dog-like to kangaroo-like', observations I made with respect to Arnhem Land thylacine depictions in 1986. These varying proportions are evident in Figure 1.

On page 43, Welch suggests five criteria for identifying paintings of thylacines. Paraphrased, these are:

1. An approximately dog-like shape for the head, body and tail;
2. Paws on the hind limbs which excludes identification as a macropod;

3. Marsupial genitalia which excludes the placental dingo;
4. A long, smooth, straight or slightly curved tail, sometimes with a broad base and a tuft at the end;
5. Body stripes.

I dispute point 1. After acknowledging that there is a wide variation in the body shape of depicted thylacines, it is puzzling that Welch's first point for identification of thylacines is 'the presence of an approximately dog-like shape for the head, body and tail'. There are several problems with this claim. While some animal depictions approach photographic realism (e.g. the horse paintings in Chaloupka 1993:200), Rosenfeld's (1982:205) research in Cape York and my own in Arnhem Land (Lewis, 1986, 1988a) has demonstrated that, generally speaking, body shape is an unreliable criteria for identifying mammal species in rock art. Furthermore, the head shape of dogs varies enormously, from the long, pointed heads of greyhounds to the bulky, blunt heads of bulldogs. With such a wide variation Welch's point 1 is of little use as an identifying feature, and it should be noted that the head shapes of paintings identified as thylacines are also quite varied (see Figure 1).



**Figure 1.** Arnhem Land rock paintings of thylacines showing the wide variation of body and head shapes, and in the relative proportions of different body parts. Figure 1G is a tracing of a photo taken by Chaloupka (Anon, 1974). All other images derived from photos taken by the author.

Finally, his suggestion that the tail should be dog-like is incorrect and in any case is contradicted by Welch's own point 4. One of the key features for identifying dogs and dingoes in rock art is a tail curled upwards and sometimes right over the back (Brandl 1973:195; Lewis 1988b:405, Figure 263). This is a tail position unattainable for thylacines, and unless a thylacine is malnourished, its tail has a broad, kangaroo-like base, more pronounced on male animals than on females (Campbell 2015). This broad base is not always depicted clearly in rock paintings of thylacines, but is never depicted this way in paintings of dogs or dingoes. Figure 1(A) is an example where the broad tail base is absent but other attributes enable it to be conclusively identified as a thylacine (see Lewis 1977:102–103, discussion of Figure 1C).

Welch's points 2–4 are essentially about specific anatomical details, the presence of which Welch correctly argues can help exclude other species. All of these points replicate, without acknowledgment, a number of points I made in 1986 and, in respect to paintings of the Tasmanian devil (*Sarcophilus harrisi*), in 1988a where I concluded that,

Without Aboriginal knowledge it is the information encoded as species-specific features that is the key to correct faunal identification in Aboriginal art ... The range of body shapes of identified species suggests that 'photographic' accuracy of form is not required to produce a meaningful pictorial representation ... if faunal identification is attempted, then particular attention must be given to the accurate reproduction of the specific details which the artist chose to represent: genitalia, foot shape, claws, tail position, stance, emphasised hairs, pouch, and so forth (1986:140).

On page 44, Welch begins a detailed discussion of the tuft or 'brush' on some apparent thylacine depictions and the presence of this feature on the actual animal. This discussion draws attention to two historical sources not previously noted (Lord and Scott 1924 and L. Stevenson interview, 1-12-1972, both cited in Paddle 2000:46) and makes several valuable observations, but as detailed below, the presentation of information is poorly structured, contains two mistakes, and again fails to attribute a number of observations to earlier work. Welch begins with the statement that, 'Researchers are aware of an additional characteristic of thylacines: the presence of short hairs producing a small tuft at the end of the tail'. He cites Brandl (1972:29) for this observation, but this is incorrect. Brandl only noted this feature in the rock paintings of some of the animals he suggested depicted thylacines, not on the actual animals themselves, as Welch states.

Welch next mentions that a number of paintings identified as thylacines in both the Kimberley and

Arnhem Land have such a 'brush' depicted. One of the previously unknown sources mentioned above to which Welch draws attention is Stevenson (cited in Paddle 2000:46), who describes a juvenile thylacine which would 'stick its bristles up and snarl' when a stranger approached'. This has led Welch to suggest that the tuft on the tail of a thylacine might become more visible 'when the animal is aroused', but he does not refer to my 1977 paper in which I made precisely the same suggestion.

Welch goes on to claim that 'European paintings of the thylacine show no signs of this tuft'. This also is incorrect. A brush is clearly visible in an 1841 illustration reproduced in the book by Paddle (2000:211, plate 9.4) which Welch refers to elsewhere in his paper. The same illustration appears in the book, *Search for the Tasmanian Tiger*, by Beresford and Bailey (1981, plate 27) and on the back cover of this book there is another example. No attribution is given for the back cover illustration, but the same painting is reproduced in Cameron Campbell's website 'Thylacine Museum' (<http://www.naturalworlds.org/thylacine/>), where it is attributed to Joseph Wolf and said to have first been published in 1861. This remarkable website, which covers all aspects of the thylacine—historical, anatomical, artworks and photographs—includes a number of other nineteenth-century paintings of thylacines where the tuft or brush is visible, and also a discussion and photograph of the tail tuft on the actual animal.

Welch advises the reader that he examined preserved specimens in museums in Tasmania, Western Australia and London, and found at least one with a tail tuft visible. He then cites my 1977 paper for the first time, telling the reader that on South Australian Museum specimens almost 40 years earlier I had observed 'a definite though irregular and flat-lying brush on the last 10 to 15 centimetres of the tail' (a similar observation, also not referred to, was made by Walsh, 2000:396). This is background information which Welch should have provided near the start of his discussion. Doing so would have eliminated the need to repeat at length the same observations and helped provide an accurate timeline on previous thylacine research in relation to rock art.

Following discussion of the tail tuft, Welch (2015:44–45) addresses aspects of the supposed *Thylacoleo* paintings which various of the authors cited above claim as evidence that supports their identifications. He makes valid observations about the shape of the ears on animals depicted in rock art (discussed above), and more specifically, the eyes on one of the paintings in question (Akerman and Willing 2009: Figures 1, 2 and 3). On the head of this painting is a pair of roughly concentric circles; one suggestion Akerman and Willing make is that

these might represent very large eyes, possibly to indicate that the animal depicted was a nocturnal hunter. Welch suggests instead that the outer circle could represent distinct skin and/or fur markings possessed by thylacines and he provides a nineteenth-century illustration showing these features (his Figure 13). He could also have pointed out that thylacines, too, are primarily nocturnal hunters so if the markings do indicate the large eyes of a night hunter they could not be taken as specific to *Thylacoleo*.

Welch next analyses a number of the other arguments put forward by the pro-*Thylacoleo* authors and again, makes valuable counter-arguments. When explaining how Aboriginal rock paintings of animals are frequently many times larger than associated humans, however, Welch does not mention that this feature was originally discussed by Brandl (1973:165 and 1980:7).

My final comment relates to Welch's claim that his Figure 4(B) represents a thylacine. The depicted animal has male marsupial genitalia and dog-like paws on the rear feet, features which immediately preclude identification as a macropod or dingo. It has two sub-parallel lines forming a band across the neck and shoulder area. The band so formed has been infilled with 'cross-bars' that are at a slight angle to the body axis, but there are no stripes across the hindquarters.

As discussed above, the presence of stripes on the hindquarters is a desirable but not always an essential feature for the identification of a painting as a thylacine, but their absence can sometimes make it difficult to determine whether a depiction is of a thylacine or a Tasmanian devil. However, the stripes across the band on the shoulder area are completely at odds with known markings on a thylacine or any other marsupial. Welch himself notes that the stripes are replicated on an associated human figure. This strongly suggests that the stripes do not represent fur markings on the animal depicted but have another meaning, perhaps representing body painting on both the animal and the human figure. The tail of the animal is horizontal, appropriate for both the Tasmanian devil and the thylacine, but taking the overall bulky head and body shape of the animal as secondary backup—more *Sarcophilus*-like than thylacine-like—I suggest the animal depicted is at least as likely to represent a Tasmanian devil as it does a thylacine. As a matter of interest, an Arnhem Land painting possibly representing a Tasmanian devil has a similar barred band across the upper chest area (Lewis 1988b: Figure 54, p. 207).

The identification of fauna, and to a much larger extent extinct fauna in rock art, can be problematic, but as outlined above an appropriate methodology is available. In any attempt to identify fauna in

Arnhem Land or Kimberley rock art the following points should be considered:

- Researchers must familiarise themselves with available anatomical information about possible target animals.
- In general, the shape of the body and head, and the proportions of one part of the depiction to another, are unreliable guides to the species portrayed and should only be used as secondary back-up to other factors.
- Anatomical details encoded in a painting are the key to identifying species in rock art. Depending on the details depicted, it is sometimes possible to eliminate various species from consideration until only one is left. In some instances it might not be possible to differentiate between two similar species. In such cases the overall shape and or proportions of the animal portrayed might increase the probability of the painting representing one species as opposed to the other.

In conclusion, researchers should draw upon and adequately cite earlier studies on identifying fauna in rock art to acquire the necessary methodological background that these studies have established. The identification of extinct megafauna in Aboriginal rock art would have significant scientific ramifications regarding our understanding of climate change, faunal extinction events and whether humans co-existed with extinct megafauna in northern Australia. It is therefore imperative that rock art researchers work with the most accurate reproductions possible and that, at least with respect to Arnhem Land and Kimberley rock art, until a more reliable methodology is developed, identifications should be based on the methodology long since established by earlier research.

## Acknowledgements

The author thanks June Ross and Daryl Wesley who read and commented on drafts of this paper, and to Ben Gunn, Martin Porr and an unnamed referee who collectively provided valuable and thorough comments.

## Disclosure statement

The author reports no conflicts of interest. The author alone is responsible for the content and writing of this article.

## References

- Akerman, K. 1998 A rock painting, possibly of the now extinct marsupial *Thylacoleo* (marsupial lion), from north Kimberley, Western Australia. *The Beagle, Records of the Museums and Art Galleries of the Northern Territory* 14:117–121.

- Akerman, K. 2009 Interaction between humans and megafauna depicted in Australian rock art? *Antiquity Project Gallery* 83(322). Retrieved 15 November 2015 from <[www.antiquity.ac.uk/pojgall/akerman322](http://www.antiquity.ac.uk/pojgall/akerman322)>.
- Akerman, K. and T. Willing 2009 An ancient rock painting of marsupial lion, *Thylacoleo carnifex*, from the Kimberley, Western Australia. *Antiquity Project Gallery* 83(319). Retrieved 15 November 2015 from <[www.antiquity.ac.uk/pojgall/akerman319](http://www.antiquity.ac.uk/pojgall/akerman319)>.
- Anon, 1974 The Lost World of Mt Brockman. *Northern Territory Newsletter*, April 3–8.
- Bednarik, R. 2013 Megafauna depictions in Australian rock art. *Rock Art Research* 30(2):197–215.
- Beresford, Q and G. Bailey, 1981 *Search for the Tasmanian Tiger*. Hobart: Blubber Head Press.
- Brandl, E. 1972 Thylacine depictions in Arnhem Land rock paintings. *Archaeology and Physical Anthropology in Oceania* 7(1):24–30.
- Brandl, E. 1973 *Australian Aboriginal paintings in Western and Central Arnhem Land*. Canberra: Australian Institute of Aboriginal Studies.
- Brandl, E. 1980 Some notes on faunal identification and Arnhem land rock paintings. *Australian Institute of Aboriginal Studies Newsletter New Series* 14:6–13.
- Campbell, C. 2015 The thylacine museum. Retrieved 15 November 2015 from <<http://www.naturalworlds.org/thylacine/>>.
- Chaloupka, G. 1993 *Journey in time: the world's longest continuing art tradition*. Chatswood, NSW: Reed.
- Clegg, J. 1978 Pictures of striped animals: Which ones are thylacines? *Archaeology and Physical Anthropology in Oceania* 13(1):19–29.
- Lewis, D. 1977 More striped designs in Arnhem land rock paintings. *Archaeology and Physical Anthropology in Oceania* 12(2):98–111.
- Lewis, D. 1986 The dreamtime animals: a reply. *Archaeology in Oceania* 21(2):140–145.
- Lewis, D. 1988a The Tasmanian devil in Arnhem Land rock art. *Australian Archaeology* 27:121–124.
- Lewis, D. 1988b *The rock paintings of Arnhem Land, Australia: social, ecological and material culture change in the post-glacial period*. Oxford: British Archaeological Reports, International Series 415.
- Macintosh, N. 1977 Beswick Cave two decades later: a reappraisal. In P.J. Ucko (ed), *Form in indigenous art: Schematisation in the art of Aboriginal Australia and prehistoric Europe. Prehistory and Material Culture Series No. 13*. Canberra: Australian Institute of Aboriginal Studies, pp. 191–197.
- Murray, P. and G. Chaloupka 1984 The dreamtime animals: extinct megafauna in Arnhem Land rock art. *Archaeology in Oceania* 19(3):98–116.
- Paddle, R. 2000 *The last Tasmanian Tiger: the History and Extinction of the Thylacine*. Oakleigh: Cambridge University Press.
- Rosenfeld, A. 1982 Style and meaning in Laura art: a case study in the formal analysis of style in prehistoric art. *Mankind* 13(3):199–207.
- Taçon, P., Brennan, W. and R. Lamilami 2011 Rare and curious thylacine depictions from Wollemi National Park, New South Wales and Arnhem Land, Northern Territory. *Technical Reports of the Australian Museum* 23(11):165–174.
- Walsh, G. 2000 *Bradshaw Art of the Kimberley*. Toowong: Takarakka Nowan Kas Publications.
- Welch, D. 2015 Thy *Thylacoleo* is a thylacine. *Australian Archaeology* 80:40–47.
- Woodhouse, S. 2012 Further consideration of a marsupial lion (*Thylacoleo carnifex*) from a rock painting in the Kimberley, Western Australia. *Antiquity Project Gallery* 86(332). Retrieved 15 November 2015 from <[www.antiquity.ac.uk/pojgall/woodhouse332](http://www.antiquity.ac.uk/pojgall/woodhouse332)>.
- Wright, B. 1972 Rock engravings of striped mammals: the Pilbara Region, Western Australia. *Archaeology and Physical Anthropology in Oceania* 7:14–23.