

Four new species of Brush-tailed Possums (Phalangeridae) from Northern Australia.

LSIDURN:LSID:ZOOBANK.ORG:PUB:AF2B9520-FC1D-4237-B2C3-1C157AC808AD

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Received 5 May 2025, Accepted 22 May 2025, Published 16 June 2025

ABSTRACT

The Common Brush-tailed Possum *Trichosurus vulpecula* is recognised by most publishing zoologists as a widespread species occupying forested and semi-forested parts of Australia and Tasmania as well as being feral in Aotearoa (AKA New Zealand).

Various forms have been described and either synonymized or recognized as subspecies and by some as full species.

Molecular studies, including those of Carnelet-Rescan *et al.* (2022) and Middleton *et al.* (2025) have indicated species-level divergences of several regional populations, being defined herein as more than 1 million years divergent from nearest relatives.

While names are available for most of these variants, three divergent populations are not formally named.

These are those from Barrow Island and Broome, Western Australia, the population from the Mitchell Plateau in the north Kimberley District of Western Australia and a divergent population from the Mackay/Eungella District of Eastern Queensland.

Each are formally named herein as full species.

A fourth divergent population from near Borroloola in the Gulf of Carpentaria District, Northern Territory is also formally named as a species.

The other forms formally recognized herein as full species are: *Trichosurus vulpecula* (Kerr, 1792) of south-east Australia (including Tasmania), most of eastern Australia and extending through the centre of the continent to the Pilbara district of Western Australia, *T. arnhemensis* (Collett, 1897) of the top end of the Northern Territory and much of the Kimberley District in Western Australia, except for the north-west, *T. eburacensis* (Lönnerberg, 1916) of upper Cape York, Queensland, *T. johnstonii* (Ramsay, 1888) of the Atherton Tableland, extending south to the Burdekin River and *T. hypoleucus* (Wagner, 1855) of south-west Western Australia.

Putative *T. fuliginosus* (Ogilby, 1831) of Tasmania is not recognized as distinct from *T. vulpecula*, even at the subspecies level.

Trichosurus vulpecula mesurus Thomas, 1926 from Inkerman, Queensland and *Trichosurus vulpecula ruficollis* Schwarz, 1909 of the Murchison District of Western Australia are both of the nominate taxon *Trichosurus vulpecula*.

The associated species *T. caninus* (Ogilby, 1892) of the ranges of south-east Queensland and coastal New South Wales and *T. cunninghami* (Lindenmayer, Dubach and Viggers, 2002) of southern coastal and ranges of New South Wales and nearby north-east Victoria are also both recognized as separate and distinct species.

The many other synonym names as listed in Iredale and Troughton, 1934 are all referable to previously named taxa listed above.

While *Trichosurus* populations are stable in many parts of Australia, species are at risk in some areas due to fox or cat predation and other factors.

Geographically confined possum taxa, including the four formally named herein are at significantly greater risk of decline or extinction and their prompt recognition is urged so as to enable proper species management plans as soon as possible.

Keywords: Taxonomy; nomenclature; Australia; possum; brush-tailed; *Trichosurus*; *vulpecula*; *arnhemensis*; *hypoleucus*; *eburacensis*; *johnstonii*; *caninus*; *cunninghami*; *fuliginosus*; new species; mowlabluffmassacre; forrestrivermassacre; abnerrangemassacre; mountmanduranamassacre.

INTRODUCTION

The Common Brush-tailed Possum *Trichosurus vulpecula* as recognised by most publishing zoologists is an iconic species.

It is a large possum species, also occupying a wide zone across forested and semi-forested parts of Australia and Tasmania as well as being feral in Aotearoa (AKA New Zealand).

It is therefore well-known to most Australians and many visitors as well.

Brush-tailed Possums are found in the centres of the largest Australian cities, where they do well on the various native and non-native fruits that are available throughout the year.

They also adapt to human presence and are regularly fed by people, allowing inner urban populations to both survive and often thrive.

Various forms have been described and either synonymized or recognized as subspecies and by some taxonomists as full species.

Molecular studies, including those of Carmelet-Rescan *et al.* (2022) and Middleton *et al.* (2025) have indicated species-level divergences of several regional populations, being defined herein as more than 1 million years divergent from nearest relatives.

While names are available for most of these variants, which is probably why no new forms have been named in the recent past, three obviously divergent populations are not yet formally named.

This could well have negative conservation implications for the relevant taxa as explained in Hoser (2019a, 2019b).

These until now unnamed taxa are those from Barrow Island and Broome, Western Australia, the population from Mitchell Plateau in the north Kimberley District of Western Australia and a divergent population from the Mackay/Eungella District of Eastern Queensland.

That they are unnamed taxa is shown in the phylogenies published by Carmelet-Rescan *et al.* (2022) and Middleton *et al.* (2025).

As the three putative taxa are morphologically diagnosable, each are formally named herein as full species.

These are *Trichosurus mowlabluffmassacre* sp. nov. from Broome and Barrow Island, *T. forrestrivermassacre* sp. nov. from the Mitchell Plateau area in the north-west Kimberley District of Western Australia and *T. mountmanduranamassacre* sp. nov. from around Mackay / Eungella in eastern Queensland.

A fourth divergent population from the hilly areas near Borroloola on the south of the Gulf of Carpentaria in the Northern Territory is also formally named as *T. abnerrangemassacre* sp. nov..

The other forms formally recognized herein as full species are: *Trichosurus vulpecula* (Kerr, 1792), with a type locality of Sydney, New South Wales, Australia, of south-east Australia (including Tasmania), most of eastern Australia and extending through the centre of the continent to the Pilbara district of Western Australia, *T. amhemensis* (Collett, 1897), with a type locality of Daly River, Northern Territory, Australia of the top end of the Northern Territory and much of the Kimberley District in Western Australia, except for the north-west, *T. eburacensis* (Lönnerberg, 1916), with a type locality of Olen Creek, Cape York, being a taxon from upper Cape York, Queensland, Australia, and *T. johnstonii* (Ramsay, 1888), with a type locality of Bellenden Ker Range (near Cairns) and generally of the Atherton Tableland, extending south to the Burdekin River and *T. hypoleucus* (Wagner, 1855), with a type locality of south-west Australia and generally of south-west Western Australia.

The two putative taxa, *T. fuliginosus* (Ogilby, 1831) of Tasmania, and putative *T. ruficollis* (Schwarz, 1909) of the Murchison District, Western Australia are not recognized as distinct from *T. vulpecula*, even at the subspecies level.

Trichosurus vulpecula mesurus Thomas, 1926 from Inkerman, Queensland is also of the nominate taxon *Trichosurus vulpecula*.

The associated species *T. caninus* (Ogilby, 1892) of the ranges of south-east Queensland and coastal New South Wales and *T. cunninghami* (Lindenmayer, Dubach and Viggers, 2002) of southern coastal and ranges of New South Wales and nearby north-east Victoria are also both recognized as separate and distinct species.

The many other synonym names as listed in Iredale and Troughton (1934) not listed herein, due to their being ignored over recent years are all referable to the previously named taxa listed above.

While *Trichosurus* populations are stable in many parts of Australia, species are at risk in some areas due to fox or cat predation and

other factors.

Geographically confined possum taxa, including the three formally named herein are at significantly greater risk of decline or extinction and their prompt recognition is urged so as to enable proper species management plans as soon as possible.

MATERIALS AND METHODS

Molecular studies of Carmelet-Rescan *et al.* (2022) and Middleton *et al.* (2025) both flagged the three unnamed brush-tailed possum taxa subject of this paper, being that from the Broome District, Western Australia, Australia, the taxon from the Mitchell Falls area of the north-west Kimberley District, Western Australia and that from the Mackay/Eungella District of mid-east Queensland, Australia.

Specimens of these three putative taxa and the other five herein recognized species of "Common Brush-tailed Possums" and the two herein recognized species of "Mountain Brush-tailed Possums" as listed in the introduction were inspected with the purpose of identifying quantifiable consistent differences between the relevant species.

Relevant past publications on the same taxa were also reviewed to aid in the process of teasing out the three newly identified species.

Because all three species were shown to have diverged from nearest relatives at or more than 1 MYA, they have at all relevant times been identified as unnamed species rather than subspecies or other kind of classification level.

A fourth divergent population from around Borroloola, in the Gulf of Carpentaria area of the Northern Territory, previously assigned to one or other of *T. vulpecula* (either as species or subspecies) or *T. amhemensis* (either as species or subspecies), while most similar to the latter taxon with a type locality of Daly River, Northern Territory, was sufficiently divergent from the main population to warrant taxonomic recognition.

As it appears to be geographically disjunct and evolving separately, it has also been formally named herein as a new species being *T. abnerrangemassacre* sp. nov..

Publications relevant to the taxonomic and nomenclatural decisions to name the relevant species included Abbott (2012), Baynes and Jones (1993), Beck (2008), Bradley *et al.* (1987), Carmelet-Rescan *et al.* (2022), Collett (1897), Davies *et al.* (2018), Finlayson (1963), Foulkes (2001), ICZN (2012), Iredale and Troughton (1934), Jackson and Groves (2015), Kerle (1985), Kerle *et al.* (1991), Lesson (1828), Le Souef (1916), Lindenmayer *et al.* (2022), Lönnerberg (1916), Meyer (1793), Middleton *et al.* (2025), Ogilby (1831, 1835), Osborne and Christidis (2022), Pattabiraman *et al.* (2021), Perry *et al.* (2015), Ramsay (1888), Reilly *et al.* (2010), Ride (1970), Ride *et al.* (1999), Russell *et al.* (2013), Schwarz (1909), Short and Turner (1994), Start *et al.* (2007, 2012), Stokeld *et al.* (2018), Thomas (1888, 1926), Upham *et al.* (2019), Viggers and Lindenmayer (2022), Wagner (1855), Waterhouse (1841), Woinarski (2004), Woinarski *et al.* (2010, 2011a, 2011b, 2012), Yokoyama *et al.* (2001) and sources cited therein.

RESULTS

As already laid out, four obviously divergent species were identified and named in this paper.

These are:

T. mowlabluffmassacre sp. nov. of the Broome area in Western Australia.

T. forrestrivermassacre sp. nov. of the Mitchell Plateau region of the Kimberley District of Western Australia.

T. abnerrangemassacre sp. nov. of the hilly area in the south of the Gulf of Carpentaria, Northern Territory.

T. mountmanduranamassacre sp. nov. of the Mackay area in mid-eastern Queensland, Australia.

All are described herein as new species in accordance with the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) as amended (ICZN 2012).

Unless otherwise stated, the descriptions relate to adult male specimens of generally good health and condition.

Spellings of the new scientific names are intentional and deliberate and should not be changed.

In all cases the names chosen are part of the "truth-telling" process of the British invasion and genocide in Aboriginal Australia from the 1700's and 1800's.

The three new names are reflective of massacres of Aboriginals that occurred near to where each species occurs.

These names follow on from the naming of the Australian Blind Snake species *Sloppytyphlops flyingfoammasacre* Hoser, 2025 in Hoser (2025b) at pages 76-79.

There is no conflict of interest in terms of this paper, or the conclusions arrived at herein.

Several people including anonymous peer reviewers who revised the manuscript prior to publication are also thanked as are relevant staff at museums who made specimens and records available in line with international obligations.

Material downloaded from the internet and cited anywhere in this paper was downloaded and checked most recently as of 19 May 2025, unless otherwise stated and were accurate in terms of the context cited herein as of that date.

While numerous texts and references were consulted prior to publication of this paper, the criteria used to separate the relevant species has already been spelt out and/or is done so within each formal description and does not rely on material within publications not explicitly cited herein.

Some material within descriptions may be repeated to ensure each fully complies with the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) and the 2012 amendments (ICZN 2012). The "version of record" is the printed version and not pdf version.

Both are identical in all materially relevant ways except for the fact that the images in the printed version may be in black and white, as opposed to colour as seen in the pdf version.

The people who assisted with provision of photos and other materials used within this paper or for research by me are also thanked for their assistances.

CONSERVATION OF THE NEWLY NAMED POSSUM SPECIES

The relevant comments in Hoser (2019a-b, 2020, 2024, 2025a-2025b) and sources cited therein apply to these species.

The use of provocative and interesting etymologies is deliberate and designed to further public interest in the relevant species, which will aid conservation outcomes and/or to highlight other matters of public importance that may otherwise be overlooked, including the genocide of Aboriginal Australians at the hands of the Imperial British Forces that invaded in the 1700's and 1800's.

TRICHOSURUS MOWLABLUFFMASSACRE SP. NOV.

LSIDurn:lsid:zoobank.org:act:5D1820D2-57DB-4FD3-83C9-1410D007FD4A

Holotype: A preserved adult female specimen (skin and skeleton) at the Western Australian Museum (WAM), Perth, Western Australia, Australia, specimen number M67031 collected from the vicinity of Broome, Western Australia, Latitude -17.913611 S., Longitude 122.248056 E.

This government-owned facility allows access to its holdings.

Paratypes: Three preserved specimens at the Western Australian Museum (WAM), Perth, Western Australia, Australia, being specimen numbers M67032 (adult specimen skin and skeleton), M67033 (juvenile male, preserved in spirit) and M67035 (juvenile female, preserved in spirit) all collected from the vicinity of Broome, Western Australia, Latitude -17.913611 S., Longitude 122.248056 E.

Diagnosis: *Trichosurus mowlabluffmassacre* sp. nov. of the Broome area in Western Australia has until now been treated as a population of either *Trichosurus vulpecula* (Kerr, 1792), with a type locality of Sydney, New South Wales, Australia, being a species of south-east Australia (including Tasmania), most of eastern Australia and extending through the centre of the continent to the Pilbara district of Western Australia, or alternatively *Trichosurus arnhemensis* (Collett, 1897), with a type locality of Daly River, Northern Territory, Australia being of the top end of the Northern Territory and much of the Kimberley District in Western Australia, except for the north-west.

T. mowlabluffmassacre sp. nov. is in fact not of either species and been separated from *T. hypoleucus* (Wagner, 1855), with a type locality of south-west Australia and generally of south-west Western Australia, the nearest related form for a period believed to exceed 1 MYA.

T. mowlabluffmassacre sp. nov. is most readily separated from both *T. hypoleucus* and *T. arnhemensis* by the presence of well defined

dark greyish black on the cheeks, versus not so in the other two species.

The preceding, combined with fur that is more-or-less lighter on top of the body rather than on the sides or of similar intensity top and bottom, being generally of a lightish grey colour on top of the dorsum, whitish venter below (except for active scent gland areas in males), a greyish-black tail, that goes from grey to blackish at the anterior end, but not in a sudden way, the tail itself being shorter and thinner than seen in all other species within the genus *Trichosurus* Lesson, 1828, reddish-brown on the upper surfaces of the lower limbs in males, and a relatively smaller, thinner more gracile build, with a slightly shorter snout, separates this species from all others within the genus *Trichosurus* Lesson, 1828.

Species in the genus *Trichosurus* are unique among the marsupials, in that they have shifted the hypaxial muscles from the epipubic to the pelvis, much like in placental mammals, meaning that their breathing cycle is more similar to the latter than to that of other non-eutherian mammals (Reilly *et al.* 2010).

Trichosurus mowlabluffmassacre sp. nov. from the Broome area is depicted in life online at:

<https://www.inaturalist.org/observations/270600690>

and

<https://www.inaturalist.org/observations/188954633>

and

<https://www.inaturalist.org/observations/135883027>

Distribution: *T. mowlabluffmassacre* sp. nov. is known only from within a 20 km radius of the Broome area in Western Australia and may well be confined by biogeographic barriers and competing species proximal on all sides, including the Great Sandy Desert to the South and Kimberley District to the north.

The population appears to be doing well in Broome, where they can be seen active in built up areas most nights if one looks. Outside of the urban area, numbers appear to be sparse.

The comments of Hoser (2019a-b) in particular apply with respect of the conservation of this taxon.

Etymology: The Mowla Bluff massacre, for which this species has its etymology, was a pre-planned extermination of native Australian Aboriginals of the Warrwa tribe of people in 1916.

British invaders sought to take as their own the Mowla Bluff area for cattle grazing and "needed" to exterminate the indigenous people at nearby Geegully Creek.

They had been living there for thousands of years.

The Aboriginals were simply rounded up at gunpoint and when all that could be found were captured, they were killed by firing squad.

The Mowla Bluff cattle station continues to the present day (2025).

In 2001, the Western Australian Police Commissioner Barry Matthews denied that the massacre occurred because there were no survivors.

More details at:

<https://monumentaaustralia.org.au/themes/conflict/indigenous/display/60844-mowla-bluff-massacre>

and

<https://web.archive.org/web/20030726024102/http://www.abc.net.au/worldtoday/s205699.htm>

TRICHOSURUS FORRESTRIVERMASSACRE SP. NOV.

LSIDurn:lsid:zoobank.org:act:249E2BDB-36E9-44DC-A02D-77707E33E6A8

Holotype: A preserved adult male specimen in formalin at the Western Australian Museum (WAM), Perth, Western Australia, Australia, specimen number M22026 collected from Mitchell Plateau, Western Australia, Australia, Latitude -14.8 S., Longitude 125.8 E.

This government-owned facility allows access to its holdings.

Paratypes: Two preserved specimens at the Western Australian Museum (WAM), Perth, Western Australia, Australia, being specimen numbers M15348 (adult male) and M22089 (subadult male) both collected from Mitchell Plateau, Western Australia, Australia, Latitude -14.8 S., Longitude 125.8 E.

Diagnosis: Until now *Trichosurus forrestrivermassacre* sp. nov. of the Mitchell Plateau region of the Kimberley District of Western Australia has been treated as a divergent population of *T. arnhemensis* (Collett, 1897), with a type locality of Daly River,

Northern Territory, Australia being a taxon of the top end of the Northern Territory and much of the Kimberley District in Western Australia, except for the north-west area around the Mitchell River plateau.

T. forrestrivermassacre sp. nov. is readily separated from *T. arnhemensis* by having (in adult females) obvious reddish-brown on the inner and outer edges of the ears, dark brown around the snout, lighter brown markings around the cheeks, obviously brownish fur on the upper surfaces of the distal limbs, reddish-brown on the rump, versus beige around the cheeks and neck, greyish fur on the upper surfaces of the distal limbs and only a slight brown on the rump in *T. arnhemensis*.

T. arnhemensis and *T. forrestrivermassacre* sp. nov. are separated from other species in the genus *Trichosurus* Lesson, 1828 by being greyish all over on top, with little if any variation in colour of the fur on the dorsum, a white or whitish underbelly, with less hair than other species and pink skin, smaller adult size and a relatively thin tail that has sparse hair on it and is not at all brushy at the end like in the other species. The ears are long and oval shaped.

The morphologically similar species *T. abnerrangemassacre* sp. nov. is separated from *T. arnhemensis* and *T. forrestrivermassacre* sp. nov. by having a tail that is slightly brushy at the end, and ears that are slightly elongate and rectangular rather than oval in shape and have little if any black or grey pigment inside, versus quite a lot in the other two.

Like *T. arnhemensis* and *T. forrestrivermassacre* sp. nov. it is separated from other species in the genus *Trichosurus* Lesson, 1828 by being greyish all over on top, with little if any variation in colour of the fur on the dorsum, a white or whitish underbelly, with less hair than other species and pink skin, smaller adult size and a relatively thin tail.

Species in the genus *Trichosurus* are unique among the marsupials, in that they have shifted the hypaxial muscles from the epipubic to the pelvis, much like in placental mammals, meaning that their breathing cycle is more similar to the latter than to that of other non-eutherian mammals (Reilly et al. 2010).

Distribution: *Trichosurus forrestrivermassacre* sp. nov. is a taxon apparently confined to the Mitchell Plateau region of the Kimberley District of Western Australia.

Etymology: The Forrest River massacre (or Oombulgarri massacre) in the north Kimberley of Western Australia is from where the etymology of this species comes from.

It was a massacre of indigenous Aboriginal Australians people by a group of law enforcement personnel and civilians in June 1926, in the wake of the killing of an invading British land thief, Frederick Hay in the north Kimberley area of Western Australia.

Hay had raped an Aboriginal woman named Angaloo and then been killed by her husband named Lumbia.

West Australian Police constables Graham St Jack and Denis Regan led a gang of 13 police who then killed 16 Aboriginal men, women and children.

In 2011, 10 survivors of the Oombulgarri people scratching for survival in the nearby settlement of Forrest River were again driven out of their settlement by Western Australian Police under threat of being shot.

Further details at:

<https://www.theguardian.com/australia-news/2019/mar/08/a-very-tragic-history-how-the-trauma-of-a-1926-massacre-echoes-through-the-years>

and https://aiatsis.gov.au/sites/default/files/research_pub/white-christ-sample.pdf

TRICHOSURUS ABNERRANGEMASSACRE SP. NOV.

LSIDurn:lsid:zoobank.org:act:FAC06B8A-8C04-41F9-A501-0CCBFDB60A51

Holotype: A preserved specimen at the National Museum of Victoria, Melbourne, Victoria, Australia, specimen number C4495 collected from Macarthur River, Borrooloola, Northern Territory, Australia, Latitude -16.07 S., Longitude 136.3 E.

This government-owned facility allows access to its holdings.

Diagnosis: *Trichosurus abnerrangemassacre* sp. nov. is a taxon apparently confined to the hilly areas immediately south of the Gulf of Carpentaria in the Northern Territory, generally within 100 km of

the type locality.

Specimens from the islands in the Gulf of Carpentaria, far east of the Northern Territory and Selwyn Range district of far northwest Queensland may also be referable to this species, but this is by no means certain.

T. abnerrangemassacre sp. nov. from the hilly area in the south of the Gulf of Carpentaria, Northern Territory is morphologically similar in most respects to *T. arnhemensis* and *T. forrestrivermassacre* sp. nov.. It is separated from those two species by having a tail that is slightly brushy at the end, and ears that are slightly more elongate and rectangular rather than oval in shape and have little if any black or grey pigment inside, versus quite a lot in the other two species.

The three species *T. abnerrangemassacre* sp. nov., *T. arnhemensis* and *T. forrestrivermassacre* sp. nov. are separated from other species in the genus *Trichosurus* Lesson, 1828 by being greyish all over on top, with little if any variation in colour of the fur on the dorsum, a white or whitish underbelly, with less hair than other species and pink skin, smaller adult size and a relatively thin tail.

Species in the genus *Trichosurus* are unique among the marsupials, in that they have shifted the hypaxial muscles from the epipubic to the pelvis, much like in placental mammals, meaning that their breathing cycle is more similar to the latter than to that of other non-eutherian mammals (Reilly et al. 2010).

Distribution: *Trichosurus abnerrangemassacre* sp. nov. is a taxon apparently confined to the hilly areas immediately south of the Gulf of Carpentaria in the Northern Territory, generally within 100 km of the type locality.

Specimens from the islands in the Gulf of Carpentaria, far east of the Northern Territory and Selwyn Range district of far northwest Queensland may also be referable to this species, but this is by no means certain.

Etymology: Ted Lenehan, was a British invader who assumed ownership of an area now known as the McArthur River Station for the purpose of grazing stock.

He was "hunting blacks" in March 1886 when he was speared by one of his victims.

His body was dismembered in a practice performed by the Ngarnji tribe "for particularly violent men, to prevent their spirit from continuing to perform evil deeds".

After Lenehan's death, Sir John Cockburn, Minister for the Northern Territory in the Downer Government in South Australia, ordered Constable William Curtis and five other police based at the Roper River to deal with the blacks.

In May 1886, this group met with the McArthur River Station manager, Tom Lynott, and 15 stockmen, including the notorious Tommy Campbell who then used captured Aboriginals to take them to their peoples.

One of the massacres that followed occurred on top of the Abner Range, a hundred kilometres from where Lenehan had been killed, giving the etymology for this species.

After picking up the fresh tracks of about 70 or 80 fleeing Aboriginals, the party of 22 galloped on horseback after them. The blacks were travelling so fast that some of the old ladies couldn't keep up and were left behind.

At least 25 of the native Aboriginal women were exterminated by the gang of 22.

More details at:

<https://c21ch.newcastle.edu.au/colonialmassacres/detail.php?r=705>

and <https://web.archive.org/web/20150914015222/https://www.themonthly.com.au/issue/2009/november/1330478364/tony-roberts/brutal-truth>

TRICHOSURUS MOUNTMANDURANAMASSACRE SP. NOV.

LSIDurn:lsid:zoobank.org:act:73746DDD-CA29-4951-B106-868E4AFCD037

Holotype: A preserved specimen (skull and skeleton) at the Queensland Museum, Brisbane, Queensland, Australia, specimen number JM22088 collected from near Victoria Park, Mackay, Queensland, Australia, Latitude -21.147222 S., Longitude 149.195278 E.

This government-owned facility allows access to its holdings.

Paratypes: Three preserved specimens at the Queensland

Museum, Brisbane, Queensland, Australia, being specimen numbers J10068 (juvenile male, skin and skull), J10067 (female, skin and skull) and J10069 (male, skin and skull), all collected from the Broken River, Eungella Range, Queensland, Australia, Latitude -21.166667 S., Longitude 148.5 E.

Diagnosis: Until now, *Trichosurus mountmanduranamassacre* sp. nov. of the Mackay / Eungella area in mid-eastern Queensland, Australia has been treated as a population of *T. johnstonii* (Ramsay, 1888), with a type locality of Bellenden Ker Range (near Cairns) and generally of the Atherton Tableland, extending south to the Burdekin River.

T. mountmanduranamassacre sp. nov. is readily separated from *T. johnstonii* by the fact that the Coppery sheen on the hair of the dorsum is lighter and yellowish in colour, versus more strongly russet in *T. johnstonii*, the upper surfaces of the distal parts of the limbs are slightly yellowish-brown, versus strongly coppery brown in *T. johnstonii* and the black bar-type markings from the snout to the eye tend to break up anterior to the eye, versus runs into the eye in *T. johnstonii*.

The similar and closely related species *T. eburacensis* (Lönnerberg, 1916), with a type locality of Olen Creek, Cape York, being a taxon from upper Cape York, Queensland, Australia is separated from the preceding two species by having yellowish-grey fur underneath, versus whitish yellow in *T. mountmanduranamassacre* sp. nov. or orangeish white in *T. johnstonii*.

In common with *T. johnstonii* the species *T. eburacensis* has a greater amount of black around the snout, both above and below the pink nose patch.

The three species *T. mountmanduranamassacre* sp. nov., *T. johnstonii* and *T. eburacensis* are separated from all other species within the genus *Trichosurus* Lesson, 1828 by having a longer, thicker and bulkier tail than seen in the other species as well as significantly larger molars in the adult males. In order by size, the tails are largest and with thickest hairs at the distal end in *T. mountmanduranamassacre* sp. nov., followed by *T. johnstonii* and then *T. eburacensis*.

Species in the genus *Trichosurus* are unique among the marsupials, in that they have shifted the hypaxial muscles from the epipubic to the pelvis, much like in placental mammals, meaning that their breathing cycle is more similar to the latter than to that of other non-eutherian mammals (Reilly *et al.* 2010).

T. mountmanduranamassacre sp. nov. is depicted in life online at: <https://www.inaturalist.org/observations/8405537> from Mackay, Queensland, Australia, photographed by "trcabroad", and

<https://www.inaturalist.org/observations/268699315> from Mackay, Queensland, Australia, photographed by "thenakedenviro".

T. eburacensis is depicted in life online at: <https://www.inaturalist.org/observations/262929584> from Coen, Queensland, Australia, photographed by Josh Lennon.

T. johnstonii is depicted in life online at: <https://www.inaturalist.org/observations/264749601> and <https://www.inaturalist.org/observations/206224070> both from Mareeba, Queensland, Australia, photographed by "alicemareeba", and

<https://www.inaturalist.org/observations/267279438> from Tolga, Queensland, Australia, photographed by C. C. White, and

<https://www.inaturalist.org/observations/143710653> from Lake Eacham, Queensland, Australia, photographed by "lylabee23".

Distribution: *Trichosurus mountmanduranamassacre* sp. nov. is only known with certainty from the Mackay / Eungella area in mid-eastern Queensland, Australia, but all brush-tailed possums from Bowen in the North and St. Lawrence in the south along the wetter coastal strip of Queensland are tentatively referred to this species. That is area of roughly 300 km in length and an average of about 50 km width, giving an area of about 15,000 square km of range, although obviously a lot of this area is effectively uninhabitable for the taxon as it consists of intensively farmed sugar cane fields.

Etymology: The Leap at Mount Mandurana, North Queensland (near Mackay) is the general area of a massacre of at least 50 native Australian Aboriginals of the Yuwibara people by invading British colonists acting on the instigation of the British Monarch. The genocide occurred sometime between 10 Apr 1867 and 30 Apr 1867 and forms the etymology for this species.

Remaining, surviving Yuwibara people are generally without property ownership of any kind and as of 2025, most still live a miserable existence avoiding prowling Queensland Police who cruise the local roads seeking Yuwibara people to bash and rob of any remaining possessions.

More details at:

<https://c21ch.newcastle.edu.au/colonialmassacres/detail.php?r=1014>

and

<https://www.news.com.au/national/queensland/news/tourism-fail-i-took-the-leap-sign-installed-on-site-where-woman-leapt-to-her-death/news-story/8dd0255b53d124ad9b1068e934abef75>

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CONFLICT OF INTEREST
None.