The writing of this essay was funded as part of The Kaurna Project 2021-2 (coordinator Rob Amery) by the Commonwealth of Australia Ministry for the Arts through its Indigenous Languages and Arts (Languages) program.

This and other essays may be downloaded free of charge from https://www.adelaide.edu.au/kwp/placenames/research-publ/

# Place Name SUMMARY (PNS) 4.04.03/01

# (Pari) MINGKAMINGKANGGA

(last edited: 8.8.2022)

SEE ALSO PNS 4.04.03/02 Wilyangaukingga

#### NOTE AND DISCLAIMER:

This essay has not been peer-reviewed or culturally endorsed in detail.

The spellings and interpretations contained in it (linguistic, historical and geographical) are my own, and do not necessarily represent the views of KWP/KWK or its members or any other group.

I have studied history at tertiary level. Though not a linguist, for 30 years I have learned much about the Kaurna, Ramindjeri-Ngarrindjeri and Narungga languages while working with KWP, Rob Amery, and other local culture-reclamation groups; and from primary documents I have learned much about the Aboriginal history of the Adelaide-Fleurieu region.

My explorations of 'language on the land' through the Southern Kaurna Place Names Project are part of an ongoing effort to correct the record about Aboriginal place-names in this region (which has abounded in confusions and errors), and to add reliable new material into the public domain.

I hope upcoming generations will continue this work and improve it. My interpretations should be amplified, reconsidered and if necessary modified by KWP or other linguists, and by others engaged in cultural mapping: i.e. Aboriginal researchers who are linking their oral traditions with other up-to-date and best available knowledge, and associated archaeologists, geographers, ecologists, anthropologists and historians.

Chester Schultz [10/7/2020].

# Place Name SUMMARY (PNS) 4.04.03/01

# (Pari) MINGKAMINGKANGGA

(last edited: 8.8.2022)

## SEE ALSO PNS 4.04.03/02 Wilyangaukingga

### **Abstract**

(Pari) Mingkamingkangga (Old Spelling [Parri] Mingkamingkangga) is the Kaurna-Miyurna name for a site on one of several creek gullies on the Willunga-Sellicks scarp somewhere between Section 276, Hundred of Willunga, and Section 643). It was recorded in 1844 as "the glen Perreminkamin-kungga" by Louis Piesse, probably from a Kaurna guide in late 1839 when Piesse was a survey worker during the first surveys of the area.

Pari ('creek, river') may not be part of the original name but rather a description of the site. Whether or not this is the case, its use by Piesse's Kaurna guide suggests that before settlement the creek was sufficiently big and well-watered (at least some of the time) to justify this description. Piesse himself also described it as a 'glen', i.e. a steep narrow valley.

The name Mingkamingkangga probably means 'place of many wounds (or much hurt)'; or possibly 'place of many wattle seed-pods'. So far we have no certain cultural or ecological information why either of these descriptors should be associated with any particular one of the scarp creeks. But 'many wounds' would almost certainly refer to an incident in a Dreaming story, either an unknown one, or perhaps (very speculatively) a known story which might possibly have an association with Mt Terrible: the murder of Kurltataku (Old Sp. Gurltatako) and the subsequent killing of the murderers by his father Nganu (O.Sp. Nganno).3

The precise location of (Pari) Mingkamingkangga is uncertain, but Piesse listed it among the five "most important" of "the little rivulets" on the drier part of the scarp southwest of Section 276. Until more detailed assessment of the creeks is undertaken, we can only judge tentatively which if them contained the site. After a preliminary comparison of these creeks as marked on the earliest maps and seen today from public roads and on the SA government's online data maps, I think the most likely candidate is #7 in my catalogue, i.e. the deep gully on the western side of Delabole Rd. The site would probably have been a waterhole somewhere on or near the base of the scarp, on Section 283 or 304. See Discussion.

Coordinates	Lat35.2907°, Long. 138.5313°	[mouth of creek gully #7]

See PNS 4.04.03/04 'Wykera-wonjurilla'. Unless otherwise stated, all Sections in this essay are in the Hundred of Willunga.

PNS 4.04.03/01 by Chester Schultz © 2022

8.8.2022

2 of 19

See PNS 4.04.02/04 Murlawirra.

See PNS 5.01/04 'Koolta Kourga'.

# **Language Information**

Meaning	[POSSIBLY 'creek' PLUS]
	'place of [many?] wounds' [OR PERHAPS 'place of [many?] wattle seed-
	pods']
Etymology	[POSSIBLY pari 'creek' PLUS]
	mingka-mingka 'wounded, hurt, broken, damaged, full of holes' [OR
	PERHAPS '[many?] wattle seed-pods']
	+ ngga 'at, place of'
Notes	The original record "Perreminkamin-kungga" includes pari 'creek, river'
	before the main word. However, this was probably not part of the name
	but a description of the site.
Language Family	Thura-Yura: 'Kaurna'-Miyurna
KWP Former Spelling	[Parri] Mingkamingkangga
KWP New Spelling 2010	[Pari] Mingkamingkangga
Phonemic Spelling	/[pari] mingkamingkangka/
Syllabification	[" <b>Pa</b> ri" +] " <b>Mi</b> ngka- <b>mi</b> ngkangga":
Pronunciation tips	Stress the first and 3 <sup>rd</sup> syllables.
	Every a as in Maori 'haka'.

# Main source evidence

Date	1844
Original source text	<ul> <li>- [After describing Willunga:] "The quarry is not properly at Willunga; the glen in which it is situate is called Piltongga [Beltunga Gully] Next to Piltongga is Burka-burkarilla, adjoining which is Mr Colville's, called Wykera-wonjurilla. At first the settlers about here had some difficulty in obtaining water, Mr Loud having sunk a well 150 feet, and a party a little farther on having sunk one 180 feet without obtaining water. I am however happy to say that from the two last wells sunk in the neighbourhood, water was obtained at 40 feet.</li> <li>Surface water now becomes scarce; and, indeed, this is the great drawback of the Aldinga Plains which now lie before the traveller. In the winter almost every glen or ravine has water in it; but the little rivulets soon run to waste, and after a few warm days they dry up. Keeping still along the foot of the range from Mr Colville's, the following are the most important: 1st. The glen Perreminkamin-kungga. 2dly.</li> <li>Wilyahowkingga; 3dly. Mullawerungga; 4thly. Kurtandilla; and 5thly. Mt Terrible Gully."</li> </ul>
Reference	'L.P' [Louis Piesse], 'Descriptive Tour through Part of District C', Adelaide
	Observer 13/4/1844: 7c,
	https://trove.nla.gov.au/newspaper/article/158918431/18834087.
Informants credited	
Informants uncredited	Kaurna-Miyurna guides during the first surveys of District C in 1839.

PNS 4.04.03/01 by Chester Schultz © 2022	8.8.2022	3 of 19
--	----------	---------

## Discussion: A RIVER, 'PLACE OF MANY WOUNDS (OR WATTLE SEED-PODS)':

#### **OBTAINING THE NAME:**

The 'District C' surveys in 1839 made the first detailed on-the-ground paper records of the country south of Adelaide to Sellicks Hill. They employed Kaurna-Miyurna men,<sup>4</sup> and the colonists employed on their teams had months of isolation in what was then 'the bush', with evenings to fill with talk around their campfires. One of these men was Louis Piesse, whose letter from one of their camps in October 1839 was published by a newspaper. It displayed his newly-acquired knowledge of Kaurna place-names and their precise locations in the Sections which the team had been surveying, and included a short Kaurna wordlist.<sup>5</sup> In April 1844 he wrote for publication a tour guide of District C, in which he gave a number of Kaurna place-names, many of them otherwise unrecorded. In his imaginary tour, he leaves Willunga, then presents a list of Kaurna place-names along the Willunga-Sellicks scarp:<sup>6</sup>

Surface water now becomes scarce; and, indeed, this is the great drawback of the Aldinga Plains which now lie before the traveller. In the winter almost every glen or ravine has water in it; but the little rivulets soon run to waste, and after a few warm days they dry up. Keeping still along the foot of the range from Mr Colville's, the following are the most important: 1st. The glen Perreminkamin-kungga. 2dly. Wilyahowkingga; 3dly. Mullawerungga; 4thly. Kurtandilla; and 5thly. Mt Terrible Gully.

This is the only known source of the names here spelled "Perreminkamin-kungga" and "Wilyahowkingga".

#### THE NAME "PERREMINKAMIN-KUNGGA":

This is clearly a Kaurna-Miyurna word, ending with the common Locative suffix ngga, 'at, place of'.

It is easily analysed as a Compound Noun consisting of *pari* (O.Sp. *parri*), 'creek, river', <sup>7</sup> plus a two-syllable noun *mingka* – appropriate to the Locative *ngga* – given in its Reduplicative form *mingka-mingka*.

<sup>&</sup>lt;sup>4</sup> "Several of them are also employed in the Survey Department at Yankalilla and Aldingha (Aldinga), who receive rations and pay the same as white laborers" (SA Register 10/8/1839: 6a, http://trove.nla.gov.au/newspaper/article/27440703/2049497).

Louis Piesse, letter to *Adelaide Guardian* from 'Camp Coortandillah 18 Oct 1839', reprinted in *SA Colonist* 1(19), 1840: 296, http://www.nla.gov.au/ferguson/1461426X/18400714/00010019/7-9.pdf.

<sup>&</sup>lt;sup>6</sup> 'L.P.' [Louis Piesse], 'Descriptive tour through part of District "C."', *Adelaide Observer* 13/4/1844: 7a-8b, http://trove.nla.gov.au/ndp/del/page/18834087.

Theoretically 'perre' might perhaps represent *piri*. But the double 'rr' makes it far more likely that Piesse is representing the stressed first vowel by the English 'er', <u>not</u> by the 'e' alone as in his "Pe-run-ga" (*Pirrangga*). He uses a stressed 'er' to represent stressed phonetic *a* in several other words, e.g. "<u>We</u>rley" (<u>wardli</u>) and "<u>Wer</u>-po-tee" (<u>warputi</u>) – though not always. Wyatt (in JD Woods 1879) also spells *pari* as 'perre', e.g. in "Ungke perre" (*Ngangkipari*).

There are two homophones<sup>8</sup> of *mingka*: 1. 'edible seed-pod of a wattle tree'; 2. 'wound, hurt, damage, hole or tear in a garment'; as an Adjective this could mean 'sore, painful'.<sup>9</sup>

The Reduplicative is used often in Aboriginal languages, and its significance (if any) is variable and often unclear. It can simply emphasize the noun in some way, or it can mean 'many, lots of', or 'very, much', or 'often'. The Reduplicative Adjective *mingkamingka* was explicitly glossed as 'wounded, hurt, damaged, broken' (which does not differentiate it from the original *mingka*), but also with the expanded meaning 'full of holes'. Sometimes *mingka* could refer to the ritual or decorative cuts and scars on the skin which marked the stages of a person's growth. But there are other explicit and quite different words for these operations, and so this meaning is not necessarily intended here.

So we have *Pari Mingkamingkangga* (O.Sp. *Parri Mingkamingkangga*), 'creek' + 'place of [many?] wounds or [much?] pain' OR 'place of [many?] wattle seed-pods'.

We have (so far) no certain information in culture or ecology why either of these descriptors should be associated with any particular one of the scarp gullies.

'Wattle seed-pods' is possibly less likely than 'wounds'. The only two primary records of 'wattle seed-pods' both spell it "mengka"; and the same authors record 'painful' ("mingga")<sup>10</sup> and 'wound' ("mingka")<sup>11</sup> with the vowel *i*. They apparently heard a difference in pronunciation which we now probably cannot elucidate. 'Mengka' was not recorded in the Reduplicative form; and the 'seedpod' meaning does not occur at all in Teichelmann's later refined and expanded manuscript. So on linguistic grounds we may consider the 'seedpods' as slightly less probable, though still a possibility if investigations ever show that a particular gully or waterhole was notable place to find wattle seeds.

'[Many] wounds' would most likely refer to an incident in a Dreaming story: either an unknown story, or perhaps (very speculatively) a story which is known slightly and might possibly have an association with Mt Terrible: the murder of Kurltataku ('Gurltatako') and the subsequent killing of

Homophone: the same sounds, but different meaning: cp. the animal 'bat' and the cricket 'bat'.

Stories of the death-warning 'Mingka Bird' are told in neighbouring cultures such as the Ngarrindjeri (see e.g. Paul Simpson 2011, *Peramangk: A Social History of the Aboriginal People of the Southern Mount Lofty Ranges*: 53, 64, <a href="http://phasai.deviantart.com/art/Peramangk-Second-Edition-2011-203140763">http://phasai.deviantart.com/art/Peramangk-Second-Edition-2011-203140763</a>). As far as we know, the Kaurna word mingka has nothing to do with this. None of the known Kaurna bird names resemble mingka at all.

Wyatt (in JD Woods 1879).

<sup>&</sup>lt;sup>11</sup> T&S 1840; Teichelmann MS 1857.

the murderers by his father Nganu (Nganno). 12 Or it might *perhaps* refer to the frequent use of the gully for the ritual cutting of decorative scars. 13

If *mingkamingka* can mean 'full of holes' (as in a tattered garment), might it refer to something topographical ('many holes or caves' in this 'river glen')? Probably not. There are other quite different words for 'hole in the ground, cave, den, burrow'. 14

There is no other known Kaurna place-name which begins with *parri*, though quite a few end with it. It may be a misunderstanding by Piesse: not a part of the original name, but rather a description of the site: in conversation something like 'This creek is *Minkaminkangga*'; or perhaps implying 'You can recognize *Minkaminkangga* because it is a [real] <u>creek</u>'. It is probably significant that Piesse's guide used *pari* in connection with this 'rivulet' and not the others, and emphasized it enough that Piesse assumed it was part of the name. It suggests that before settlement the creek at this spot was sufficiently big and well-watered (at least some of the time) to justify this description. Perhaps it flowed more often than most of the others. <sup>15</sup>

Accordingly, we now have a subtly revised title (*Pari*) *Mingkamingkangga*, 'place of wounds' (which is a creek).

#### THE LOCATION OF "PERREMINKAMIN-KUNGGA":

Piesse also describes 'Perreminkamin-kungga' as a 'glen', i.e. a steep narrow valley. But how much does this help us to find the right one? He also describes 'Piltongga' and Brownhill Creek as 'glens', <sup>16</sup> but no 'glen' in this drier part of the scarp could be as lush as 'Piltongga', or cover such a big area. <sup>17</sup> And when he says that 'in the winter almost every glen or ravine has water in it', is he

<sup>12</sup> See PNS 5.01/04 'Koolta Kourga'.

A cultural connotation of 'ritual cutting' is only <u>possible</u> in *Mingkamingkangga*, derived from a noun which on its own merely refers to '<u>wounds in general</u>'. In contrast, a cultural rather than general reference is <u>almost certain</u> in the other Reduplicative place-name *Purkapurkarilla*, derived from the noun *purka* (*burka*), meaning 'old person' and <u>possibly</u> 'knowledgeable senior person' (see PNS 4.04.02/03).

See *yapa* 'hole, burrow, hole through something, e.g. tube'; *tau* 'hole, opening, passage through something'; *taa* 'mouth, hole, opening'; *waarki* 'holes in the ground made by burrowing animals'; *pindi* 'pit, hole in the ground, grave'. But these are not *mingka* 'pain, damage' unless a Dreaming story interprets them so.

Perhaps this is reinforced by a snippet from an old surveyor. Charles Hope Harris was "employed in the Lands Department in the 1860s" and gained his Surveyor's License in 1869 (GH Manning 2010, Place-names Of Our Land: 966). Though very much an amateur in languages, he had a long-term interest in Aboriginal words and place-names, often garbled. Among his papers he passes the opinion that "para' or 'perra'" (i.e. pari) means or refers to "water running between deep banks" (CH Harris papers, bound volume p.79, PRG 1112/1, SLSA). It is possible that he heard this gloss during his surveying days in the 1860s or 70s from a Kaurna-Miyurna survivor, rather than from an old settler's aging memory. Perhaps it doesn't tell us much; or perhaps it reinforces the likelihood that this was the normal usage of the word, and that 'Perreminkamin-kungga' was noted for being for that kind of watercourse, after rain at least.

<sup>&</sup>lt;sup>16</sup> Piesse 1844b: 7c, 8b.

<sup>17</sup> See PNS 4.04.02/01 Pirltangga.



distinguishing 'glens' from 'ravines', or is he lumping *all* the creeks along the scarp together as 'glens'. 18

The precise location of *(Pari) Mingkamingkangga* is uncertain, but Piesse listed it among the five "most important" of "the little rivulets" on the drier part of the scarp, somewhere between 'Wykerawonjurilla' and 'Mullawerungga'. The location of 'Wykera-wonjurilla' (Creek #14) on Section 276 is certain. <sup>19</sup> That of 'Mullawerungga' (*Murlawirrangga*, #1) on Section 643 is beyond reasonable doubt. <sup>20</sup> Therefore 'the glen Perreminkamin-kungga' and 'Wilyahowkingga' are both somewhere in the 7-km stretch of scarp between these two Sections. We can call this the 'target area'. Until more detailed assessment of its creeks is undertaken, we can only collect all available evidence and make a tentative judgement which two of them contained the sites named by Piesse. <sup>21</sup>

Among the earliest records the primary authority is Richard Counsel's Field Book 102, containing his on-the-spot sketch maps during the surveys in late 1839. These are supplemented by maps drawn up in Adelaide on the basis of his work. Interpreting these maps onto the ground today, we see immediately that all the creeks in the Willunga basin have been drastically modified and extended since settlement. In 1839 on the Aldinga plain only Creek #1 (Silver Sands Creek) reached the sea outlet; the rest disappeared underground a short distance from the scarp, usually less than a km. In 1839 on the Aldinga plain only Creek #1 (Silver Sands Creek)

In the imagined 'tour' which Piesse wrote in 1844, he 'travels' from Willunga southwest along the bottom of the scarp, approximating the line of the survey boundary which Counsel had mapped in 1839. Parts of this survive now as the diagonal bits of Plains Rd, and other diagonal tracks and road fragments, both public and private, along the base of the scarp. We can look for the sites on or near this line.

<sup>18</sup> Piesse 1844b: 7c. Gawler is happy to call even the best of them 'ravines', describing some of the same gullies as "beautiful grassy ravines" (Gawler 1839a, 'Notes of an excursion by His Excellency the Governor', SA Gazette & Colonial Register 5/1/1839: 2c, http://trove.nla.gov.au/newspaper/article/31750326/2052584).

See PNS 4.04.02/04 'Wyecareywindererilla'.

<sup>&</sup>lt;sup>20</sup> See PNS 4.04.03/04 Mullawirra.

Each name would not have applied to a whole gully or the whole length of a creek if these were long, as this is not traditional Aboriginal naming practice.

Richard Counsel 1839a, Field Book 102, Hundred of Willunga (SA Geographical Names Unit): 41, 42, 43, 45 (see Maps 1-4 in this essay).

Richard Counsel 1839b, 'Original', Diagram Book Hundred of Willunga, page X4 (SA Geographical Names Unit); FH Burslem 1839, 'Plan of the country south of Adelaide from O'Halloran Hill to Mt Terrible, including District C and portions of Districts B and D', Adelaide: Survey Office (map C236 in State Library of SA); John McLaren, 'Country South of Adelaide from O'Halloran Hill to Mt Terrible, including District C and portions of Districts B and D', London, Arrowsmith, 1 September 1840.

See Appendix (Table of Statistics). In order to simplify and clarify my reference to them, I have given each of 24 creeks an arbitrary number. All of them can be seen together on Maps 1 and 3 in this essay.

This whole survey boundary is clearly marked on Counsel 1839b (see Map 3 in this essay).



When I put together all the currently available data<sup>26</sup> for this target area, there are two creeks which appear to stand out from the others as probably the 'most important rivulets' for water at or near this part of the scarp. They are #7 (the deep gully on the western side of Delabole Rd, with a wide and fertile mouth) and #6b (which rises south of Louds Hill Rd and follows it east before emerging from the base of the scarp at Newman Close near the junction of Almond Grove Rd and Hahn Rd).

Creek #7 is one of the longest and widest glens. It has the second-largest catchment (138 ha, exceeded only by #6b);<sup>27</sup> and in 1839 its continuation on the plain was mapped as the secondlongest (1.3 km, exceeded only by #6b). 28 Today it has a substantial tree-line for 1.5 km before it is joined by #12.29

Creek #6b is not among the longest glens, but it has the largest catchment (147 ha). On the plain in 1839 it had the longest continuation above ground (1.9 km); moreover the surveyors mapped a waterhole where it was joined by flow from #6a (underground in those years).<sup>30</sup> Today it has a very substantial tree-line for 1.6 km before continuing from Ryan Rd as a drain. 31

Of the other creeks in the target area, none seems as likely to be an 'important rivulet' as those two:

Northeast of #7: Both #13 and #8 have very small catchment areas, and in 1839 both had very short courses above ground. Creek #8 has a long gully but it is narrow, and downstream from the scarp the creek is insignificant. Both of their tree-lines today are very scanty.<sup>32</sup>

Between #7 and #6b is #12: In 1839 it was above ground for about 1km from the scarp; but its catchment is much smaller than #7 or #6b, and its 'glen' is very short (c.0.5km) and narrow. Today its tree-line is much smaller than those of #6b and #7.33

Southwest of #6b: There seem to have been no significantly large or well-watered creeks in the 5km stretch between #6b and #1 (Mullawirrangga).34

PNS 4.04.03/01 by Chester Schultz © 2022

8.8.2022

8 of 19

See also the Data File in the password-protected 'Complete' version of this essay, and much more in my unpublished digital folder 'pnf4-04-03 SellicksSCARP'.

See Map 4 'Creek catchments & length'.

See Maps 2 & 3. On these 1839 maps, Creek #9b (flowing NW to Ryan Rd) might be counted as longer on the plain than #7 only if we included its drainage below its underground junctions with the larger creeks #11 and #6b. Moreover, as seen today from Ryan Rd, #9b on the scarp is short, shallow, and certainly cannot be described as a 'glen'.

See Maps 6 'Creek treelines (1)' & 7 'Creek treelines (2)'.

<sup>30 &</sup>quot;Water 22 No√ 39" at the border of Sections 281-282 (Counsel 1839a: 45; see Map 2). In 1839 #6a was not marked on the plain at all, only in the scarp; but a drain now connects it to #6b at the 1839 site of 'water' (see Map 7).

See Maps 6 & 7. Some of these trees are big River Red Gums, as seen at the Hahn Rd crossing, about 400m west of Almond Grove Rd.

See Maps 6 & 7.

See Maps 6 & 7.

Both #7 and #6b could be described as 'glens'. But but since Piesse gave his 'most important rivulets' in geographical order from northeast to southwest, we may conclude that his '1st. the glen Perreminkamin-kungga' is very probably #7; and his '2dly. Wilyahowkingga' is very probably #6b, a km south-west of it. In each case the named site would probably have been a waterhole somewhere on or near the base of the scarp.

These findings are not watertight; they will need to be checked against much more sophisticated geographical investigation of individual creeks, and any other specific historical evidence which might turn up.

e.g. I have assumed that the natural water supply of the creeks could be compared by the amount of rainfall input available to them, as measured by the areas in their respective catchments above the base of the scarp. <sup>35</sup> I define these areas by the watersheds of their tributary creeks, as revealed by the contour lines on the base map. But all these creeks are 'fractured rock aquifers'; i.e. their water comes from underground cracks in the hard basement rock of the scarp. This could mean that the natural water supply where Piesse tells us to find it (at or near the base of the scarp) cannot be defined only by the surface catchment area, but could also be affected by underground seepage from outside the catchment? I have tried to balance this uncertainty by including the length of the creeks on the surface *below* the scarp edge, as mapped in late 1839 – on the assumption that this might also help to indicate the likely availability of surface water at that time, affected by variable underground input from the hills, and also by variable retention on the plain due to variable soil and underground conditions. <sup>36</sup>

There might be other factors and other evidence that could affect my findings. An existing study from 2004 might be able to help us here, but I cannot trace it.<sup>37</sup>

<sup>.....</sup> 

See Map 4. Creek #9b looks long on Map 4 (1.6 km), but (1) Only the unbroken line represents its individual flow (0.86 km), while the broken line (extending this to nearly double the length) shows a stretch where it was not visible above ground, but joined underground by flow from #6 and #11; (2) It has a very small catchment; and (3) On the ground today it is a very small trench along its whole length from the hills down. The same applies to a lesser extent on #11 and #4. None of the other creeks here seems credible as one of the 'most important rivulets' (see Map 8 'Creek treelines (3)'). The visible lengths of *all* the scarp creeks has been greatly increased by the digging of drains to prevent flooding. Originally only #1 (Silver Sands Creek) reached the Washpool above ground (see Counsel 1839a: 41 = Map 1 in PNS 4.04.03/04 Mullawirra).

<sup>&</sup>lt;sup>35</sup> For lengths in 1839 and catchments today, see my comparative table below, and Map 4.

Catchment areas and 1839 lengths on the plain do not always go hand in hand; e.g. #17 and #16 have large catchments but very short lengths in 1839.

In 2004 a study was made of the drainage lines of 22 aquifers coming from fractured rocks in the scarp, recording the condition of their water, vegetation and fauna ('Water Allocation Plan for the McLaren Vale Prescribed Wells Area', Adelaide and Mount Lofty Ranges NRM [Natural Resource Management] Board, 2007: 7-8, via home page <a href="http://www.naturalresources.sa.gov.au/adelaidemtloftyranges/water/water-allocation-plans/mclaren-vale">http://www.naturalresources.sa.gov.au/adelaidemtloftyranges/water/water-allocation-plans/mclaren-vale</a>; but this document gives no reference for the 2004 study which it cites). This study might provide modern records of flow volumes, old trees, and other relevant data, and so enable other researchers to improve on my locations for Piesse's "important rivulets" (Perreminkamin-kungga' and 'Wilyahowkingga'.

#### **APPENDIX:**

# TABLE OF STATISTICS FOR THE CREEKS OF THE WILLUNGA-SELLICKS SCARP.<sup>38</sup>

CREEKS	Catchment Area	Length of creek on
(listed from northeast to	(approx. hectares above	plain in 1839
southwest;	base of scarp)	(approx. km below base
see Map 4)	as measured by NatureMaps;	of scarp)
	see my digital folder 'CATCHMENTS_scarpCreeks'	from Counsel 1839a & 1839b;
	CATCHINENTS_scarpcreeks	see my digital folder 'LENGTHS1839_ScarpCreeks'
#17 Wirra Ck at	118.7	0.87
Willunga	116.7	0.07
#16 Piltongga	165.2	0.64
(Beltunga Gully)		, , ,
#15 Burkaburkarilla	5.7	0,91
#14 Wykerawonjurilla	218.7	1.7
(Willunga Ck)		
#13	30.2	0.7
#8	19.8	0.55
#7	138.0	1.3
#12	30.1	1.0
#6b	147.0	1.9
#6a	5.3	Shown only above scarp base
#11	44.7	1.0
#9b	4.1	0.61
#9a	15.3	0.42
#20	27.5	0.6 (??1.78)
#10	4.1	0.45
#19	36.8	0.49
#5	13.6	0.15
#18	24.0	0.46
#4	55.1	0.67
#3	19.6	0.2
#2	10.5	0.18
#1 Mullawirrangga	71.9	1.4
(Silver Sands Ck)		
#21	Very small; ignore	
#22	Very small; ignore	
#23 Kurtandilla	99.7	2.3
(Sellicks Creek)		
#24 (Mt Terrible Ck)	Not on the northern scarp.	

This information is extracted from "Assessing The Creeks: the relative 'importance' of 'rivulets' in the Willunga-Sellicks scarp" in my document 'BACKGROUND8\_SellicksScarp.pdf'.

### References to background documents

For background information and analysis relating to the creeks and gullies of the Willunga-Sellicks scarp, including Mt Terrible Gully, see my document 'BACKGROUND8\_SellicksScarp.pdf', and my digital data folder 'pnf4-04-03\_SellicksSCARP'.

**End of Summary** 

#### SEE ALSO THE MAPS ON THE NEXT 8 PAGES:

p.12: MAP 1: Gullies & possible water sources along the Willunga-Sellicks scarp (Annotated).

Base map: 'Map-1' from Diagram Book Hd of Willunga (SA Geographical Names Unit 1985).

p.13: MAP 2: Counsel 1839a, Field Book 102, p.45: Ryan Rd to Delabole Rd area. (Annotated).

Base map: Richard Counsel 1839a, Field Book 102 p.45 (GNU).

p.14: MAP 3: Pre-colonial tree cover on the Aldinga Plains and creek gullies along the Willunga-Sellicks scarp: detail from original Map 02.

Base map: Counsel 1839b, Diagram Book Hd of Willunga p.X4 (GNU). Annotated with data from Counsel 1839a.

p.15: MAP 4: Scarp creeks: Catchment areas & Length of watercourses on plain in 1839.

Base map: SA Government, NatureMaps website <a href="http://spatialwebapps.environment.sa.gov.au/naturemaps/?locale=en-us&viewer=naturemaps">http://spatialwebapps.environment.sa.gov.au/naturemaps/?locale=en-us&viewer=naturemaps</a>, 1/3/22.

p.16: MAP 5: Scarp creeks and contours: northeast.

Base map: SA Government, NatureMaps, 17/11/21.

p.17: MAP 6: Scarp creek treelines in target area (1): northeast.

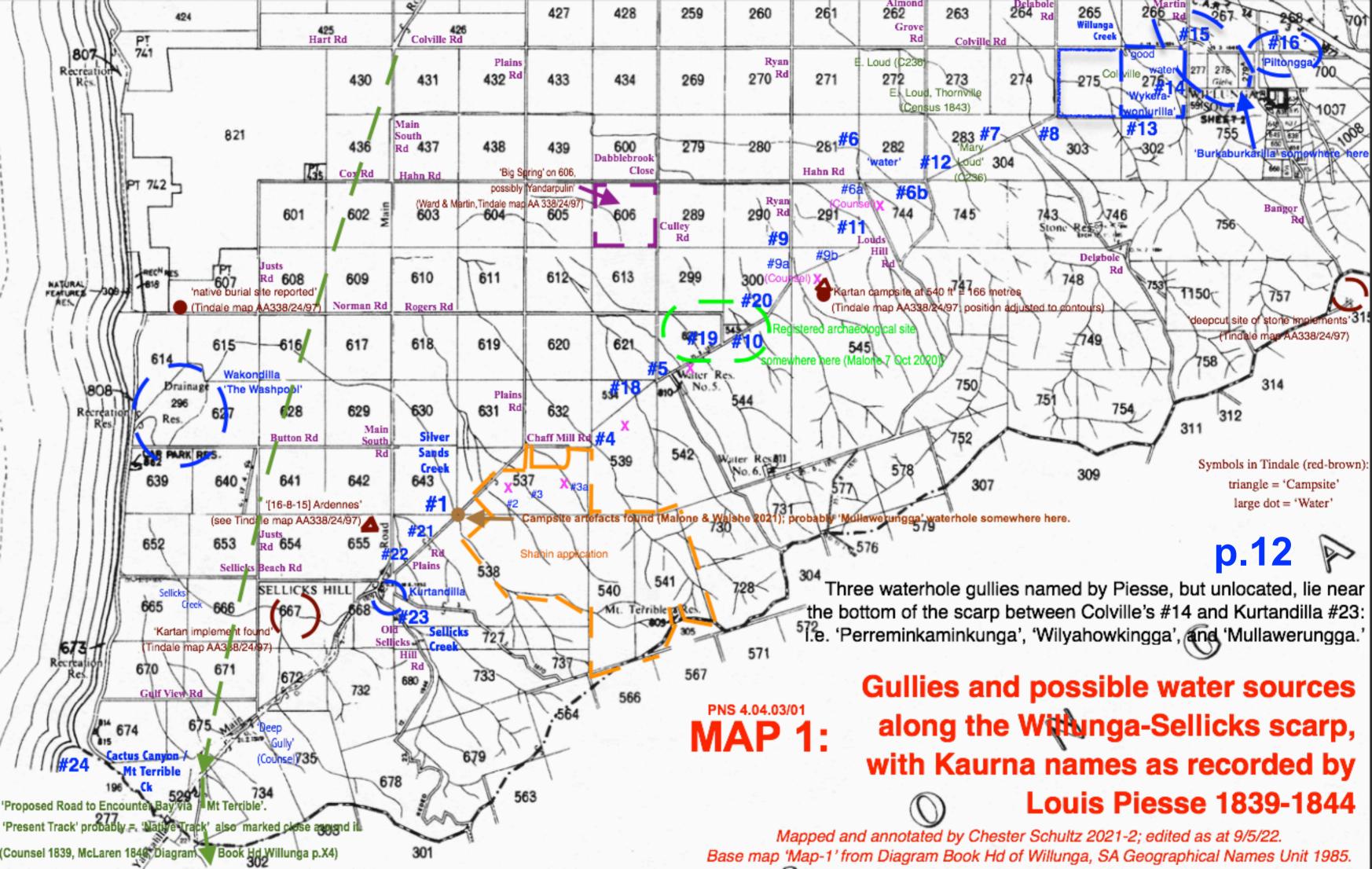
Base map: PlanSA, South Australian Property & Planning Atlas (SAPPA) https://sappa.plan.sa.gov.au/, 17/6/22.

p.18: MAP 7: Scarp creek treelines in target area (2): #11, #7, #12 & #6b.

Base map: SAPPA, 17/6/22.

p.19: MAP 8: Scarp creek treelines in target area (3): southwest.

Base map: SAPPA, 17/6/22.



713	To fon	vaid fee	m Josep	33/		
259	Ryan 260 Rd	261 Colville		263	Delabole Ro 264	268
169	270	24 January	2/2	243	274	27° #13
2.7/9 Hahn Rd	280	281	wit 252)	2, 6 3 #12	#8 #7 2 8 4	283
289	290	297 #11	#6b #6a		7	
299 Distric	300	#9b #9a				k k
D. Di	#101"5		H M S	9		
7	3	17:		j	31.65 4	6 3.20
	17		5	Loo to Jul		
		Co	ounsel 183	<b>39a, Field</b> Ryan Rd to I	Book 102	

cods here

FB 102 :45

