

## Research article

# Visitor trends and mountain tourism dynamics at a storm shelter in the Hex River mountains, Western Cape, South Africa (2008–2023)

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### ABSTRACT

This study explores the mountain trends of visitors to Perry Refuge, a storm shelter in the Hex River mountain range, Western Cape from 2008-2023. The purpose of this study was to ascertain the observations of visitors to the refuge regarding route choice and other features. Most of the literature was gleaned from the Journals of the Mountain Club of South Africa (MCSA), the entity responsible for the construction of the shelter. The methodology comprised securing the shelter records (the logbook) and then ascertaining the key features and trends of mountain tourism dynamics. The results indicated there has been a massive increase of visitors between the 1960s and the recent present. Post the Covid-19 lockdowns, there was also a major increase in visitors. Women comprise around one-fifth of all visitors. There has been a trend away from organised club meets to bespoke and private trips. Route choices still accord with the relatively easiest route out of the area, especially towards Waaihoek and the Ceres farms. Regarding activity choice, there have been noteworthy developments in arete-climbing and trail running to access the refuge. Environmental observations were generally minor, the most important being that parties are still running out of water on the ridge route between Waaihoek and Perry Refuge. A number of parties reported route-finding difficulties during the second timeframe. Recommendations include taking measures to ensure sustainable wilderness hygiene measures given the significant increase in visitors.

### KEYWORDS

Storm shelter;  
Hex River mountains;  
mountain tourism,  
route choices;  
activity choices

## Introduction

Emergency shelters or refuges have a history over the last seventy years in the western Cape mountains of South Africa, and longer in Europe. Where deaths of mountain users have occurred, a shelter has usually been constructed after the event to forestall any further tragedy. This was the case on the Boland Hiking trail in the Hottentots Holland Mountains after a number of deaths in the early 1980s. A shelter was constructed on the slopes of Langkloofberg half way between the start of the trail at Sir Lowry's Pass and Landdrooskop Hut, the then first overnight destination (Levy, 1982). It is now in disuse, with the Sir Lowry's Pass-Landdrooskop route of the Boland Hiking Trail no longer in operation. Another emergency shelter was constructed half way up the Waaihoek path to the University of Cape Town Ski Club hut after a number of would-be skiers perished in a snowstorm in the mid-1940s (Pells, 2003). There is also an emergency shelter halfway up the Towerkop mountain in the Great Swartberg outside Ladismith, Western Cape (Mountain Club of South Africa [MCSA], 2001). There are of course emergency shelters on many peaks in the Alps, ranging from shelters barely big enough for two people to huts like the Solvay on the Matterhorn. The shelter in this study, Perry Refuge, situated at 33°29'40"S 19°23'20"E and at 1604masl, is located within a protected area, Fonteintjiesberg Nature Reserve, in the Hex River mountain range between Worcester and Ceres, Western Cape (Chief Directorate: Surveys and Mapping, 1997a, 1997b; Map 1). It was established in December 1957 but was destroyed by fire in December 2005. The shelter reopened in October 2008 and present hut records begin on that date. I was interested in exploring the tourism dynamics of the refuge as I have visited the site many times, under a variety of environmental conditions. I was keen to discover current mountain tourism practices and was also interested in ascertaining the influence of the

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trail/mountain running revolution generally although the range is not a site for formal trail races (McKay et al., 2019; MCSA, 2020). This shelter was moreover chosen as a site of records as it is deep within a mountain range, is not an ordinary hiking destination but one that demands a keen sense of navigation and weather awareness plus above average fitness and agility. It is an arduous and potentially hazardous undertaking whatever route is chosen. Therefore, it can be said to be a site of true mountaineering in the country.

## Literature review

There is very little scientific literature on mountain tourism and even less on mountaineering tourism in South Africa, and whatever there is refers to the Drakensberg (for example, Linde & Grab, 2008). It must be noted, however, that the Western Cape is a node of adventure tourism (McKay, 2016) and that mountains are integral to rural tourism (Rogerson & Rogerson, 2014). The Hex River mountain range was first mentioned in the Mountain Club of South Africa (MCSA) Journal (JMCSA) in 1898 (MCSA, 1970). The storm shelter has been mentioned in the JMCSA since 1958 although the first recorded visit to the Sentinel Peak area was mentioned in the 1907 journal (MCSA, 1970). Journal entries include shelter reports in the Annual Reports section as well as individual journal entries by visitors to the shelter (Inglis, 1966). The Club's other publications also mention the refuge, for example the Properties' Handbook which recounts the event that precipitated the building of the shelter: "In September 1956, a party of young MCSA members was doing a traverse of the Hex River Mountains from Worcester towards the Milner *vlakte* (flats). Their beacon record on Horseshoe Peak spoke of a clear day, but a strong north-west wind started to blow. They camped that night at Sentinel Camp, the site of what was to become the Perry Refuge. Before morning a fierce storm struck and flattened their camp, and it was a wet and half-frozen group that started to struggle back to Thomas Hut. Unfortunately, one of the parties did not make it and died on the scree between Woolworth Building and Pulpit Nek" (MCSA, 2001, pp. 31-32).

After this tragedy deep within the Hex River mountains in 1956, an emergency shelter was constructed at Sentinel camp (now named Perry Refuge) in December 1957 to prevent any further deaths (MCSA, 1958a). More recently, Heath (2023a, p. 4) has written a study on global warming in the Hex River mountains where the refuge was mentioned: "... the Perry Refuge records in the JMCSA (archival research) were studied and analysed, to ascertain weather- and climate-related observations. The observations of traversers visiting Perry Refuge are significant, as anyone attempting a traverse of the Hex River mountain range has to pass this point. Furthermore, anyone arriving at the refuge, either from Fonteintjiesberg, Waaihoek or Buffelshoek (all above 1800 masl), has to passage through a number of topoclimates. The refuge, moreover, is deep within the mountain range, and not on its periphery. ... The second chart referred to a closer, more localized analysis of Perry Refuge hut records which comprised perennial water, storm shelter, fire, increase in wind, meets cancelled due to inclemency, and soil instability due to fire." These 'hut records' refer to the Annual Reports contained within and towards the end of the journals of the Mountain Club of South Africa (JMCSA). Other official documents where the refuge is mentioned include the provincial government's conservation body's official protected area management plan (CapeNature, 2021). Where sanitation is concerned, the club's handbook states the following: "Please note there are no toilet facilities so wilderness hygiene principles apply" (MCSA, 2001, p.32). Wilderness hygiene involves one digging and burying one's waste at least 50m from any path (not that one exists in the area of the refuge) or water course. Hamilton and McMillan (2004, p. 45), in their Guidelines, state that "toilets should be provided wherever people are concentrated; especially in mountain protected areas human waste should be treated to a high standard before being released back into the environment from these higher places in the watershed". Temple et al. (1982) show how hazardous bacteria survive in buried faeces. As it would be impractical to construct a toilet in such a remote place, other measures have to be considered. The Bureau of Land Management (BLM) (n.d.) in Utah, United States of America, specifies the following: "However, desert and alpine areas will require visitors to pack out human waste and toilet paper in a Waste Alleviation and Gelling (WAG) bag or other portable toilet equipment that safely holds waste until it can be disposed of properly."

The area around the refuge is pristine: the vegetation under 1800masl is South Hex Sandstone Fynbos, only two fires have occurred since 1980, and no alien plants exist (CapeNature, 2021). Mammals found in the area include the Grey Rhebuck (near-threatened) and Leopard (vulnerable) plus 'ecotypical game species' such as "Klipspringer, Steenbok, Cape Grysbok and Common Duiker" (CapeNature, 2021, p. 36). The only source in literature with details of the routes is the JMCSA: "Climbing via the peaks of the Divide, it takes the average party roughly 8 hours to reach the Thomas Hut on Fonteintjiesberg, while Waaihoek Hut in the other direction via the lower route on the Jan du Toit's Kloof Pinnacles is some 5½ hours away. The farm 'Eselfontein' and the cave on Moraine Corner are each a good day's trip away" (MCSA, 1958a, p. 34). The most important data source is an article by Inglis (1966) detailing the first seven years of the refuge. This article points to a sustainable number of people visiting the refuge on average each year. Most trips were in summer followed by autumn. Few trips occurred in spring and winter. There was an interesting balance or route choices for the three major exit routes from the refuge. During this timeframe there were 20 trips by 66 people (10-15% women) to the refuge between February 1958 (the construction trip in December 1957 has been omitted) and October 1965 (seven years). Interestingly, there was one private school group trip and one helicopter evacuation of a casualty. Seven trips were undertaken in autumn (35%), nine in summer (45%), two in spring (10%), and two (10%) in winter (no

traverse in thick snow has been mentioned, however). One semi-climbing trip turned into a waterless epic of survival. Four trips were reported to be heading north-eastwards, three south-south-eastwards, and four south-westwards.

Arriving at and exiting the Perry Refuge area necessitates careful route finding (there is no path, only cairns and a faint track in places guide the parties) and exposure to extreme weather conditions between 1500-2000masl, should there be a storm: “Anyone who knows the Hex River mountains will be aware that at the point of the Great Divide there are three practical exit routes: over Buffelshoek Peak, via Fonteintjiesberg, or a traverse across to Waaihoek. All require route finding and at least half a day at high altitude before descent to safety is possible” (Blignaut, 1981, p. 62). It is moreover necessary to employ some scrambling technique to cross the Ridge pinnacles at the head of Jan du Toits Kloof on the way to Pells: “The traverse of the Ridge Pinnacles provided quite a bit of enjoyable rock scrambling....” (MCSA, 1958b, p. 36). A number of parties have attempted to cross the exposed gap between Sentinel Peak and Buffelshoek Peak but have elected to abort this route choice. This even occurred during the emergency retreat from Perry Refuge when the fatality occurred (MCSA, 1957). A member of a party that was beset by an extreme storm in the 1980s explains: “I had considered the shortest route over Buffelshoek Peak, but after discussion, we considered the very real possibility that the ferocious wind would make climbing impossible across the exposed Sentinel Buffelshoek gap” (Blignaut, 1981, p. 62). The area is thus a mountaineers’ playground, but it is also dangerous. According to a mountaineer on the Hiking South Africa (2024) website, “There are a number of areas where access is only open to MCSA members. e.g. the Hex Mountains are very difficult to gain access to if you aren’t a member. Notably solo hiking in the Hex is allowed, but be very careful of that as the Hex is no joke – plenty of risk of serious injury or death if you aren’t careful. I did a solo 3-day hike there a few years ago – it was amazing, but at times also terrifying.” In more recent years, the 1990s saw many official club meets in the Hex River mountains (these meets are no longer so frequent): “Highlights included a four-day traverse of the Hex River mountains at New Year” (MCSA, 1991, p. 151) and “The Hex River mountains proved particularly popular, with seven meets taking place there” (MCSA, 1994, p. 146). Moreover, in the 1990s there were regular training exercises conducted with the local South African Air Force (SAAF) helicopter squadron: “A large-scale simulated rescue exercise was held in the Hex River mountain area” (MCSA, 1991, p. 151). With the trail running revolution, “Perry Refuge ... is seeing increased use with the spike in popularity of Hex traverses amongst the trail running community” (MCSA, 2020, p. 166). In terms of speed hiking or traversing, a one-day speed traverse between Ceres and Worcester occurred in 1931 (Field, 1932). Another interesting development is the growth in climbing ridges or arêtes, where the use of ropes is recommended and travelling quickly with lightweight packs (Cleare, 1980), to reach the shelter (Schaff, 2018), although rope-assisted ascents up steep gorges occurred much earlier (Schaff, 1969).

## Methodology

The primary research method comprised a content analysis of the present shelter logbook entries: Logbook page no./nos., Trip number, Month and year, Number in party, Route, Observations. A fellow mountaineer visited the refuge in early December 2023 and photographed each page of the logbook on my request, which were then emailed to me. Pages were printed to form a hard copy record. It must be emphasised that writing entries in a shelter or hut logbook is akin to writing a diary; a largely subjective affair. However, valuable data has arisen. Some entries were cryptic or incomplete, and hence it was difficult to work out the origin or exit of a route. Where entries were too cryptic with respect to routes, these have been left out of the analysis. Some visitors did not complete the logbook (for example, Warren, 2010) and thus it is difficult to make an accurate analysis. In addition, some traversers, especially trail runners on the classic Hex traverse (Thomas-Pells), do not descend the few extra hundred metres to the refuge, opting to carry on contouring around to the Jan du Toits Pinnacles. It was also difficult to determine the gender, as some names are common to both. A map was produced to aid analysis (Map 1). The UKZN Faculty of Humanities ethics exemption approval number is 00024430. The following research questions (RQs) were derived:

1. What are the visitor numbers to the shelter/refuge between c.2010 and 2023?
2. What are the route choices of visitors to the refuge?
3. Are there any changes in mountain user profiles (trail runner, hiker, winter mountaineer) to the refuge?
4. What are the environmental (wild/bird-life and water) observations of visitors to the refuge?

It was decided to write a separate paper on weather observations which were a rich enough data source to warrant this.

### Analysis

The available logbook pages numbered 76 pages with 126 trips recorded. The data is presented in Table 1 in the page that follows.

**Table 1: Logbook pages from 2008-2023**

Logbook page number	Trip number	Month and year	Number in party	Route	Observations
1-2	1	October 2008	3	Helicopter insertion, walk out via Waaihoek	Construction team
3-4	2	November 2008	2	Down via Waaihoek	Rebuild
4	3	December 2008	7 (incl. 3 F)	Pells to Milner	Section meet
4	4	December 2008	5	Thomas hut to Witels	Upcountry section meet
5	5	December 2008	3 (incl. 2 F)	Buffelshoek Kloof- SW Ridge of Sentinel Pk-Cleft Kloof return	
5	6	December 2008	10 (incl. 6F)	Thomas hut-Perry- Mitchell's Pass	Upcountry section meet
5	7	April 2009	2 (incl. 1 F)	Pells hut-back to Pells	"2 antelope here on arrival"
6	8	April 2009	3	Matroosberg-Hoare hut (full Hex traverse)	
7	9	July 2009	6 (incl. 2 F)	Waaihoek-Perry- Waaihoek start	Day trip from Pells-Perry-bottom Waaihoek
7	10	August 2009	2	Thomas hut	Two black crows followed party from Brandwacht
9	11	October 2009	3	Thomas hut-Milner Pk- Moraine kloof	
9	12	December 2009	6 incl. 3 F	To Moraine kloof	
10	13	December 2009	2	SE Ridge on Sentinel-Perry-down via Sentinel kloof	
10	14	June 2010	8 incl. 1 F	Thomas-Perry- Hoare (snow traverse)	
11	15	July 2010	6 incl. 1 F	Pells-Perry	"Some fairly deep snow closer to Hoare and Pells"
12	16	September 2010	2	Thomas-Perry- Pells and out	
12	17	October 2010	2	Thomas	
12	18	December 2010	2	Thomas-Pells	
13	19	December 2010	3	Thomas-Perry	
14	20	December 2010	1	Pells-Perry-Pells	
15	21	January 2011	3	Jan du Toitskloof-Perry- Waaihoekskloof	
15	22	January 2011	2	Pells-Perry-Thomas	
15-17	23	March 2011	9	Thomas hut- Milner <i>Vlakte</i>	UCT club meet
17	24	April 2011	3	Pells-Pells	
18	25	September 2011	4 incl. 2 F	Thomas-Perry- Point Hi	
19	26	November 2011	2	Pells hut	
19-21	27	December 2011	8 incl 3 boys	Perry to Witels (2) Thomas hut to Witels (6)	Upcountry section youth meet
21	28	December 2011	9	Thomas- Milner <i>vlakte</i>	
21	29	December 2011	10	-	
22	30	December 2011	4 incl 1 F	Thomas-Milner <i>vlaktes</i>	
22	31	January 2012	3 incl 2 F	Thomas hut-Eselfontein	
22	32	February 2012	2	Climbed SW Ridge of Sentinel from Buffelshoek Kloof, down Sentinel Kloof	
23	33	March 2012	6 incl 3 F	Freshers dam- <i>vlaktes</i> -Buffelshoek Pk- Sentinel- Perry	
23	34	April 2012	4 incl 1 F	Hoare-Milner <i>vlakte</i>	
24	35	October 2012	6	Hoare hut- Perry- Hoare hut	Antarctica training weekend
24	36	December 2012	3	-	
24	37	December 2012- January 2013	2 incl 1 F	From Pells- leaving via Pells	
25	38	January 2013	4	From Jan du Toit's Kloof- Waaihoek	
26	39	July 2013	2	Thomas hut-Thomas	
26	40	December 2013	3	Buffelshoek kloof	
26-27	41	December 2013	2 F	Thomas hut- Thomas	
27	42	December 2013	8 incl 3 F	Pells hut-Horseshoe Pk- Buffelshoek-Milner <i>Vlakte</i>	
28	43	January 2014	2	Zuurberg-Thomas hut	
28	44	February 2014	3	Kanetvlei-Sentinel kloof-SW Ridge of Sentinel Pk-back via Sentinel kloof	
29	45	March 2014	2 incl 1 F	Pells-Perry	
29	46	March 2014	2	Waaihoek-Perry-Thomas	
30	47	March 2014	2 incl 1 F	Thomas-Perry-Pells	
30	48	July 2014	3	Thomas-Perry-Pells	"A very snowy crossing from Thomas Hut."
30-31	49	October 2014	2 incl 1 F	Matroosberg- Waaihoek (full Hex traverse)	
31	50	November 2014	6 incl 4 F	Waaihoek-Buffelshoek (BFH) Pk- Kweperfontein (decided to retreat from BFH <i>nek</i> (saddle) and return to Pells)	
32	51	December 2014	2	Thomas hut-Milner <i>Vlakte</i> -Moraine Kloof	
33	52	December 2014	10 incl 3 F	Thomas hut- Waaihoek	Section meet
33	53	December 2014	5 incl 3 F	Thomas hut- Milner <i>Vlakte</i>	
34	54	January 2015	6 incl 3 F	Pells and back again	
34-35	55	March 2015	3	Sentinel Kloof- SE Ridges of Sentinel	
35	56	June 2015	3 incl 2 F	Hoare-	
36	57	August 2015	6 incl 2F	Hoare-	"Lost the path-GPS saved us in the end"
36	58	October 2015	5 incl 2 F	Pells hut and back	
37	59	December 2015	5 incl 4 F	Thomas to Moraine kloof	
37	60	December 2015	2 incl 1 F	Thomas hut-Moraine kloof	
37	61	May 2016	3	Waaihoek	"Came to see if the hut survived the Jan 2016 fire"
38	62	September 2016	10	Pells- Fonteintjiesberg-Thomas Thomas-Pells-Thomas	Rescue team/s training
38	63	November 2016	4	Thomas hut-Pells	
39	64	November 2016	5	-	
39	65	February 2017	9 incl 2 F	Thomas-Pells	
40	66	April 2017	2	Sentinel kloof- SE Ridge Sentinel Pk, descend Sentinel kloof	
40	67	April 2017	3 incl 1 F	Hex river traverse (presumably from Thomas)	
41	68	September 2017	2	Thomas hut- Hoare hut	
41	69	September 2017	7	Thomas hut- Perry-Pells	"Epic hike taking a few wrong turns"
42	70	October 2017	7 incl 1 F	Thomas hut-Perry-Point Hi	
42	71	November 2017	1	Hoare and back	Day trip, 1 hr 30 min from Hoare
43	72	December 2017	7	-	Section meet
43-45	73	December 2017	11 incl 3 F	Thomas-Perry-Waaihoek	"Saw black eagles...disas never seen before"
45-47	74	January 2018	4 incl 2 F	Thomas-Perry	
47	75	March 2018	7	Waaihoek parking-Perry- Jan du Toits kloof	"4.5 hrs to Perry from Waaihoek parking"
48	76	March 2018	6 incl 2 F	Thomas hut-	
48	77	March 2018	1	Thomas hut- Thomas	"Still plenty of water"
49	78	April 2018	3	Hoare hut-Ceres	"Sighting of pair of black eagles at lunch yesterday"
49	79	April 2018	7 incl 2 F	UCTSMC hex traverse- from Pells- ?	UCT club meet
50	80	August 2018	1	Thomas hut	"Thomas hut tot hier in knie diep sneeu" (Thomas hut to here in knee deep snow)

50	81	October 2018	1	Pells and back	"To deliver supplies. On heli-hack."
51	82	October 2018	5	Thomas hut- Waaihoek	Private hiking club-Trailblazers
51	83	November 2018	4 incl 2F	Thomas hut-Waaihoek	
52	84	December 2018	3		
52	85	December 2018	?		
53	86	March 2019	8	Jan du Toits kloof and return	
53	87	April 2019	1	Waaihoek parking-Perry-Buffelshoek-run to Thomas and back-Waaihoek	Trail running
54	88	June 2019	3F	Thomas- Waaihoek hut	
54	89	September 2019	2	Thomas-Milner-Morainekloof	
55	90	November 2019	3	Thomas-Perry-Thomas	
55	91	December 2019	8 incl 2F	Thomas hut- Witels	Section meet
56	92	December 2019	2	Pells and back	
56	93	December 2019-January 2020	2 incl 1F	Waaihoek-Milner <i>vlakte</i>	
56	94	September 2020	5	Waaihoek-Milner <i>vlakte</i> -De Doorns	First party since early January 2020 and after Covid pandemic outbreak in March 2020 (nine-month break)
57	95	October 2020	2 incl 1F	Pells to here and back	"From Heli-hacking"
57	96	November 2020	2	Thomas hut to Pells?	
58	97	November 2020	4 incl 3F	From Waaihoek parking?	"Slightly stressful trying to find Perry in the dark but so worth it"
58-59	98	November 2020	5 incl 3F	Thomas hut- Pells	"Running out of water despite carrying 2.5-3l"
60	99	November 2020	5 incl 2F	Thomas hut- Ben Etive	
60	100	December 2020	4 incl 2F	Thomas hut-Pells	
61	101	December 2020	7 incl 3F	Hex traverse?	
62	102	January 2021	1	Hoare hut-Michell's Peak-Milner Ridge Pk-Perry-Hoare hut	"Chilled amble over to Perry this morning"
62	103	February 2021	5 incl 2F	-	
63	104	March 2021	5	Thomas hut-Buffelshoek- Ben Etive	
63	106	March 2021	4	-	
64	107	April 2021	4 incl 1F	Thomas hut-Buffelshoek- Witels	
64	108	April 2021	5	Pells-Buffelshoek Twins-Buffelshoek Peak- Ben Etive	"No water between here and Pells"
65	109	June 2021	5	Thomas-Hoare hut	
65	110	July 2021	2 incl 1 F	Eselfontein-Milner Pk-Mostertshoek Pk	
66	111	September 2021	4 incl 3F	Hex traverse?	
66	112	September 2021	1	Thomas hut-Perry-Buffelshoek Pk-Perry	
67	113	October 2021	2	Pells-Buffelshoek- Pells	
67	114	November 2021	5	Helicopter insertion	"Heli-hacking"
68	115	December 2021	2	Pells-Perry	
68	116	April 2022	1	Waaihoek-Perry	
69	117	April 2022	4 incl 2F	Cilliers farm-Milner Peak-Buffelshoek Pk-Perry-return	
70	118	July 2022	2	Pells? Central Pk?	Maintenance
70	119	October 2022	3 incl 1F and 1 kid	From Pells?	
71	120	November-December 2022	4 incl 3F	Matroosberg-Hoare Hut (full Hex traverse)	
71	121	December 2022	5 incl 4F	Thomas Perry-Milner traverse	
72	122	December 2022	3 incl 1F	Thomas hut-Mt Brodie-	"GPS route finding"
72	123	December 2022	2	Thomas hut-Sentinel Pk-Perry-(Pells?)	
73	124	December 2022	2 incl 1F	Thomas hut-Thomas hut	
74	125	April 2023	1+?	Hoare hut-Agter Milner <i>Vlakte</i>	
74	126	May 2023	6	Waaihoek-Thomas	
75	127	November 2023	8	-	
76	128	December 2023	2	Eselfontein-Buffelshoek Pk-Buffelshoek Dome- Eselfontein	

Note: F=Female

The longest break (nine months) between visits was between January 2020 and September 2020 due to the Covid-19 pandemic. In 2010 a traverser reported thick snow closer to Pells on the traverse to Perry, while in winter in 2014 and 2018 parties traversed from Thomas Hut in fairly thick snow. No necessity for alpine gear was mentioned though.

## Findings and discussion

There have been 520 visitors to the refuge over fifteen years, with 36 trips (28%) undertaken in spring, 50 (39%) in summer, 28 (22%) in autumn and only 13 (10%) in winter. Female participants numbered 107 (21%) with the majority visiting in summer and spring (15% up to 1965; see Inglis, 1966). Four groups reported difficulties with route finding with two groups completely reliant on GPS to find their way. There was a dramatic increase in visitors after the Covid lockdowns in 2020; this equates to a 460% increase in visitors in Spring 2020 compared to Spring 2019. This phenomenon was noted by guides in the Drakensberg too (Heath, 2023b).

**Table 2: Year and season of visitors to shelter (number of visitors not bold; number of trips in bold)**

Year	Spring (Sept-Nov)	Summer (Dec-Feb)	Autumn or Fall (Mar-May)	Winter (Jun-Aug)
2008	5 <b>2</b>	25 <b>4</b>		
2009	3 <b>1</b>	8 <b>2</b>	5 <b>2</b>	8 <b>2</b>
2010	4 <b>2</b>	11 <b>5</b>		14 <b>2</b>
2011	16 <b>2</b>	36 <b>6</b>	12 <b>2</b>	
2012	6 <b>1</b>	9 <b>3</b>	10 <b>2</b>	
2013		18 <b>5</b>		2 <b>1</b>
2014	8 <b>2</b>	23 <b>4</b>	6 <b>3</b>	3 <b>1</b>
2015	5 <b>1</b>	7 <b>2</b>	3 <b>1</b>	9 <b>2</b>
2016	19 <b>3</b>	9 <b>1</b>	3 <b>1</b>	
2017	17 <b>4</b>	22 <b>3</b>	5 <b>2</b>	
2018	10 <b>3</b>	3 <b>2</b>	24 <b>5</b>	1 <b>1</b>

2019	5 <b>2</b>	12 <b>3</b>	9 <b>2</b>	3 <b>1</b>
2020	23 <b>6</b> (after lockdown)	17 <b>4</b>		
2021	12 <b>4</b>	2 <b>1</b>	18 <b>4</b>	7 <b>2</b>
2022	7 <b>2</b>	12 <b>4</b>	5 <b>2</b>	2 <b>1</b>
2023	8 <b>1</b>	2 <b>1</b>	7 <b>2</b>	
Total	148 <b>36</b>	216 <b>50</b>	107 <b>28</b>	49 <b>13</b>
Female participants	25	58	15	9

The classic Hex traverse refers to the route from Thomas Hut on Fonteintjiesberg to Pells Hut on Waaihoek, of which 32 trips are recorded (some parties did this in reverse, however). Some parties opted to go down the Witels gorge (a canyoning route) instead of proceeding to Pells. Other parties proceeded on to Milner *Vlakte* before dropping down to farms in the Ceres valley. At least five parties traversed from Thomas to Perry before returning the same way. Another popular route is the day trip from Pells Hut to Perry. The proximity of the university property to the refuge has affected visitor numbers. Some very interesting routes are being conducted up steep kloofs with some scrambling; these include Jan du Toits, Buffelshoek and Sentinel kloofs or defiles. Another favoured traverse is from Pells to Moraine kloof, which is past Milner Peak. An extremely arduous undertaking is the full Hex River traverse from Matroosberg to Waaihoek, undertaken by three parties; this is in contrast to the period from 1958-1965 where no record of such a traverse exists (Inglis, 1966). Some ascents from the Ceres valley farms have proceeded to Perry before returning the same way. One party however carried on all the way to Mostertshoek Twins which is an ambitious route, necessitating some tricky route work over Fouche’s Nek between the Twins and Waaihoek Peak (Chief Directorate: Surveys and Mapping, 1997b).

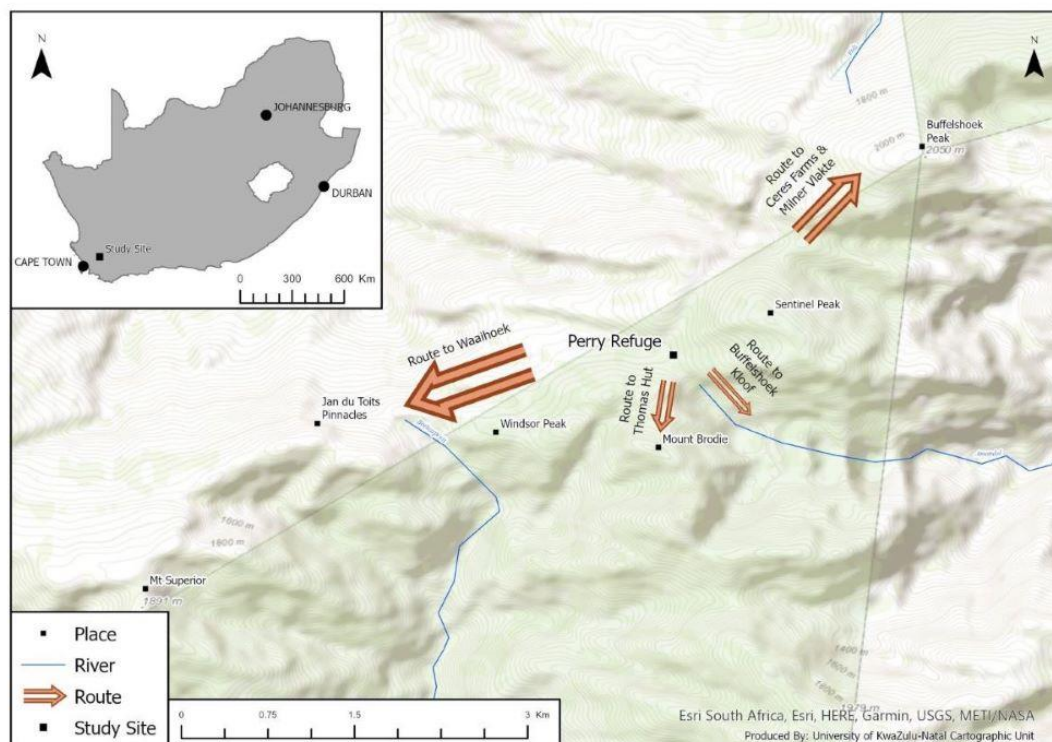
**Table 3: Choice of routes (see Map 1)**

Classic Hex traverse: Thomas Hut-Perry Refuge-Pells Hut	32
Helicopter insertion	2
Pells/Hoare huts-Perry- Pells/Hoare huts	25
Thomas hut-Witels	5
Buffelshoek Kloof- Sentinel Peak (SE and SW ridges)-Perry- Cleft/Sentinel Kloofs	6
Matroosberg-Hoare/Pells huts (the full Hex traverse)	3
Pells hut-Perry-Milner-Moraine Kloof	1
Thomas hut-Perry-Moraine Kloof	5
Jan du Toits Kloof-Perry-Waaihoekskloof/ Pells or Hoare Huts	2
Thomas hut-Perry-Milner <i>Vlakte</i> -Kweperfontein farm (Ceres)	6
Thomas hut-Perry-Buffelshoek Peak-Eselfontein farm (Ceres)	3
Pells-Perry-Milner <i>Vlakte</i> - Kweperfontein farm	5
Thomas hut-Perry-Thomas hut	5
Buffelshoek kloof-Perry-Buffelshoek kloof	1
Eselfontein-Perry-Eselfontein	3
Pells/Hoare huts-Perry-Thomas hut	5
Pells/Hoare huts-Perry-Jan du Toitskloof	1
Pells hut-Perry-Eselfontein	2
Pells/Hoare huts-Perry-Thomas hut-Pells/ Hoare huts	1
Jan du Toitskloof-Perry- Jan du Toitskloof	1
Pells/Hoare huts-Perry-Milner <i>vlakte</i> - De Doorns (presumably over Prospect Peak)	1
Pells/Hoare huts-Michells Peak-Milner Ridge Peak-Perry- Pells/Hoare huts	1
Eselfontein-Milner Peak-Mostertshoek Peak	1

Unsurprisingly, 63% of routes comprised the south-west direction from Perry; this is the shortest route out of the area (MCSA, 1958a). It also comprises traffic from the university huts on Waaihoek. 23% of routes proceeded in the north-east direction towards Buffelshoek Peak, with only about 9% opting to traverse south-south-east towards Mount Brodie. It can be tricky to cross the exposed gap between Sentinel Peak and Buffelshoek Peak, especially in strong winds (Blignaut, 1980). About 5% of trips comprise the ambitious route to the south-east (with some scrambling and possibly abseils) down Sentinel kloof (Cleare, 1980; Schaff, 2018).

**Table 4: General directions of routes from Perry Refuge (number in unbold, percentage in bold) (see Map 1)**

North-eastwards (towards Buffelshoek Peak and further)	26 ( <b>23%</b> )
Eastwards (down Sentinel Kloof)	6 ( <b>5.2%</b> )
South-southeastwards (towards Mount Brodie and further)	10 ( <b>8.77%</b> )
Southwestwards (towards Jan du Toit’s Ridge Pinnacles and further)	72 ( <b>63.1%</b> )



**Map 1: Volume of tourism traffic (outwards) from Perry Refuge**  
**Source: Mr Brice Gijbertsen, Geography Department, UKZN Pietermaritzburg**

Most activities comprise ordinary hiking with one or two areas necessitating mild scrambling (use of hands to ascend or descend). Ten trips comprised climbing where ropes are recommended. There were two helicopter insertions (for building or heli-hacking) while ten trips comprised official mountain user group meets. Upcountry mountain user group trips, a feature since 2008, have not been an occurrence since 2011. Interestingly, the area is a site for search and rescue training and also South African National Antarctic Expedition (SANAE) training. No trips where alpine gear has been needed have been recorded which is symptomatic of global warming (Heath, 2023a) and changing route choices and hiking preferences amongst visitors to the refuge. There were two trail running trips although the number is bound to be higher (the reasons have been given already). Also, in the 1990s air force helicopters aided and enhanced search and rescue exercises; this has been seemingly discontinued to the detriment of training, both of aircrew and rescuers on the ground, due to the dire straits of the South African Air Force (SAAF) (Gibson, 2023). Compared to the 1960s, there are no school trips (Inglis, 1966).

**Table 5: General classification of activity**

Route type	Frequency of trip
Pells/Hoare hut-Perry-and back to Pells (one/two day trip)	25
Three or four day hiking (but with some use of hands- scrambling)	72
Six or seven day hiking (full traverse)	3
Climbing (with ropes)	10
Helicopter insertion (heli-hack and maintenance)	2
Mountain user group meet (private club/university club) (three upcountry meets)	10
Training weekend (rescue and SANAE)	2
Trail or speed running trip (MCSA, 2020; Field, 1932)	2
Traversing in snow	4

Judging from the observations of the visitors, the Perry Refuge area is not a biodiversity hotspot (no mention of biodiversity was made in Inglis, 1966). Two antelope were spotted by one group at the shelter which makes it a slightly unusual sighting (however, antelope associate shelters and huts with safety). These would be the ubiquitous Klipspringer or possibly the Grey Rhebuck (CapeNature, 2021). Considering the area is known to be frequented by the (Cape Mountain) Leopard (CapeNature, 2021), no trace (either scats or pawprints in the snow) of this species has been mentioned in the reports. Black crows were reported by one party as quirkily following them all along the Thomas-Perry traverse. Verreaux Eagles were spotted by two groups. Two groups reported either no water en route or running out of water.

**Table 6: Environmental-wildlife, birdlife and water observations**

Antelope	2 seen at shelter
Black crows	Followed party from Brandwacht Peak (near Thomas Hut)
Verreaux (Black) Eagles	Spotted on traverse (2 groups report this)

## Conclusion

520 people visited the refuge between 2008 and 2023, an average of 34.6 people per year. Between 1958 and 1965, in contrast, an average of 9.4 people per year visited the refuge (Inglis, 1966). There was thus an increase of 368% (research question [RQ] 1). This must have had concomitant effects on human waste disposal and the erosion of routes and will need to be considered in terms of ameliorative actions in future (the Utah BLM remedy may have to be looked at) since a high-altitude toilet at the site has its own problems and constraints (BLM, n.d.). There was also a massive jump in visitor numbers post the Covid-19 pandemic lockdowns. Regarding route choices (RQ2), the preference was overwhelmingly for the southwest (and ‘easiest’) route to the Jan du Toit’s Ridge Pinnacles and beyond, followed by the northeast route to Buffelshoek Peak and beyond, and then the south-southeast route to Mount Brodie and further. A recent, minor but growing route choice is south-eastwards down Sentinel Kloof, an ambitious undertaking (Map 1). For the third research question, there has been a drastic reduction in organised club or mountain user group meets, including practice rescue operations with the air force and a move to private and even individual trips. There has also been an overall transition encompassing the trail running revolution and volunteerism in helping eradicate alien vegetation on the steepest ground imaginable (heli-hacking since 2018). Another very positive development is the increase in arête-climbing, where ribs or ridges are climbed as quickly as possible with light packs. Regarding gender, the proportion of women visiting the refuge was 15% between 1958 and 1965; this had increased to 21% between 2008 and 2023. Four parties reported route-finding difficulties. No winter mountaineering gear was mentioned as needed although there have been at least three snow traverses from Thomas Hut to Perry in the 2010s (RQ3). The area remains a truly multi-purpose and multi-user mountaineering arena. Regarding environmental observations (RQ4), parties reported seeing only two noteworthy species, antelope (probably Klipspringer) and Black (Verreaux) Eagles. There is still the phenomenon of parties running out of water or finding no water between Pells Hut and the refuge (Inglis, 1966).

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