Catalogue of the Passes of New Zealand

CLUB DES CENT COLS

Editions des Cent Cols

1. About this catalogue

This catalogue of New Zealand passes contains 671 passes. 39 passes are on paved roads, 54 on dirt roads and the remainder on paths or wilderness.

The catalogue is structured according to the administrative sub-divisions or land districts of New Zealand of which there are 16 Regional Councils and Unitary Authorities.

2. Geography and geology of New Zealand

New Zealand (Maori Aotearoa) is an island nation in the South-Western Pacific. It consists of two main landmasses – that of North Island (Te Ika-a- Māui) and that of South Island Te Waipounamu) and numerous smaller islands. The country's islands lie between latitudes 29° and 53°S and longitudes 165° and 176°E. There are roughly 1600 kilometres between the extremities of the two main islands. The population today is approx. 4.6 million people.

The 113,729 square kilometre North Island is more densely populated than the South Island, with about 3.5 million people of ¾ of the population of New Zealand living here. The biggest cities Auckland and the capital Wellington are on the North Island.

The northern part of North Island features a number of low mountain ranges – the Hakarimate Range, the Kaimai Mamku Ranges and also two predominately forested central mountain ranges.

In the centre of the island is a highly-active volcanic plateau where we can find the World Heritage Site of the Tongariro National Park. The plateau culminates in Mount Ruapehu (2797 metres) and also features the country's largest lake, Lake Taupo, nestled in the caldera of one of the world's most active supervolcanoes. Further south is the 2518m high volcano Mount Taranaki in the Egmont National Park.

The South Island is the largest landmass of New Zealand with 151215 km2 but very sparsely populated with only 1.1 m people. It is divided along its length by the Southern Alps - the highest mountain range of Australia and Oceania. There are 18 peaks over 3000 metres, the highest of which is Mount Cook (Aoraki) at 3754 metres. Here are also the highest passes, of which 120 are over 2000m high. Many of them are in glaciated areas where there is little sense in conveying the bicycle.

The West Coast region between the Eastern Alps and the Tasman Sea is extremely narrow and is one of the wettest areas of the world, therefore jokingly called "Wet Coast". The extreme southwestern features massive fjord landscapes formed by ice-age glaciation, the most famous of which is the Milford Sound fjord. East of the Southern Alps are the Canterbury Plains, a large flood plain that is used intensively for agriculture.

New Zealand owes its topography to its position on the boundary between the Pacific and Indo-Australian Plates. It is part of the Zealandia microcontinent that broke away from the Gondwanan supercontinent some 85 million years ago and then gradually submerged. About 25 million years ago a shift in plate tectonic movements began to contort and crumple the region – this is now most evident in the Southern Alps formed by compression of the crust beside the

Alpine Fault. Elsewhere the plate boundary involves the subduction of one plate under another producing a number of trenches.

Being part of the Pacific Ring of Fire New Zealand suffers from regular earthquakes and volcanic activity. Geothermal activity, geysers and hot springs are also prevalent.

The isolation of New Zealand for most of its history explains the development of land flora and fauna independently of the rest of the globe.


168° E
172°
176°
180° E
36° S
40°
44°
PACIFIC OCEAN
TASMAN SEA
NORTH ISLAND
SOUTH ISLAND
Kaitaia
Whangarei
Dargaville
Takapuna
Auckland
Manukewa
Pukekohe
Hamilton
Tauranga
Cambridge
Whakatane
Ruatoria
Tokoroa
Rotorua
Taupo
Marupara
Gisborne
Tauranga
New Plymouth
Hawera
Napier
Hastings
Whanganui
Marton
Palmerston North
Levin
Masterton
WELLINGTON
Motueka
Nelson
Blenheim
Westport
Greymouth
Hokitika
Kaikoura
Christchurch
Ashburton
Timaru
Twizel
Waitangi
Wanaka
Oamaru
Alexandra
Te Anau
Dunedin
Gore
Balclutha
Invercargill
Oban
166° 30' E
50° 48'
169° E
52° 30'
N
0
150 km

3. History

Not only does New Zealand belong geographically to the youngest land formations on earth it was also amongst the last to be settle by people.

Radiocarbon dating suggest that New Zealand was first settle by Eastern Polynesians between 1250 and 1300 following a long series of voyages through the southern Pacific islands. One explanation of the Maori term of Aotearoa for New Zealand is the description “the land of the long white cloud”.

It is likely that the Māori adapted for 500 years to the conditions of New Zealand in a special way without extraneous cultural influences. The climate was colder and rougher in New Zealand than in their native subtropical conditions. The Māori developed progressively from hunter-gatherers to farmers and fishermen.

The influence of Māori on the wildlife of New Zealand by hunting and by imported pets was dramatic and led to the extinction of many animal species, of which the Moa and the Haast's eagle probably are the best known.

The Māori population was divided into tribes and sub-tribes who would sometimes cooperate, sometimes compete and sometimes fight violently with each other. Cannibalism was part of the fate awaiting tribes defeated in war.

From a European perspective New Zealand was at the other end of the world and was not paid any attention until the mid 17th century. The first Europeans known to have visited New Zealand were Dutch explorer Abel Tasman and his crew in 1642. In a hostile encounter four crew members and at least one Maori were killed. On October 7th, 1769 "discovered" James Cook New Zealand and subsequently hoisted the Union Jack to formally claim the land for the British King George III. After a 6-month trip Cook had circumnavigated both main islands and so well documented his observations that a first, relatively good map of the country could be drawn.

After the existence of New Zealand was well known and documented, it attracted numerous traders to the islands trading food, metal tools, weapons and other goods for timber, food, artifacts and water. The introduction of the potato and the musket transformed Maori warfare.

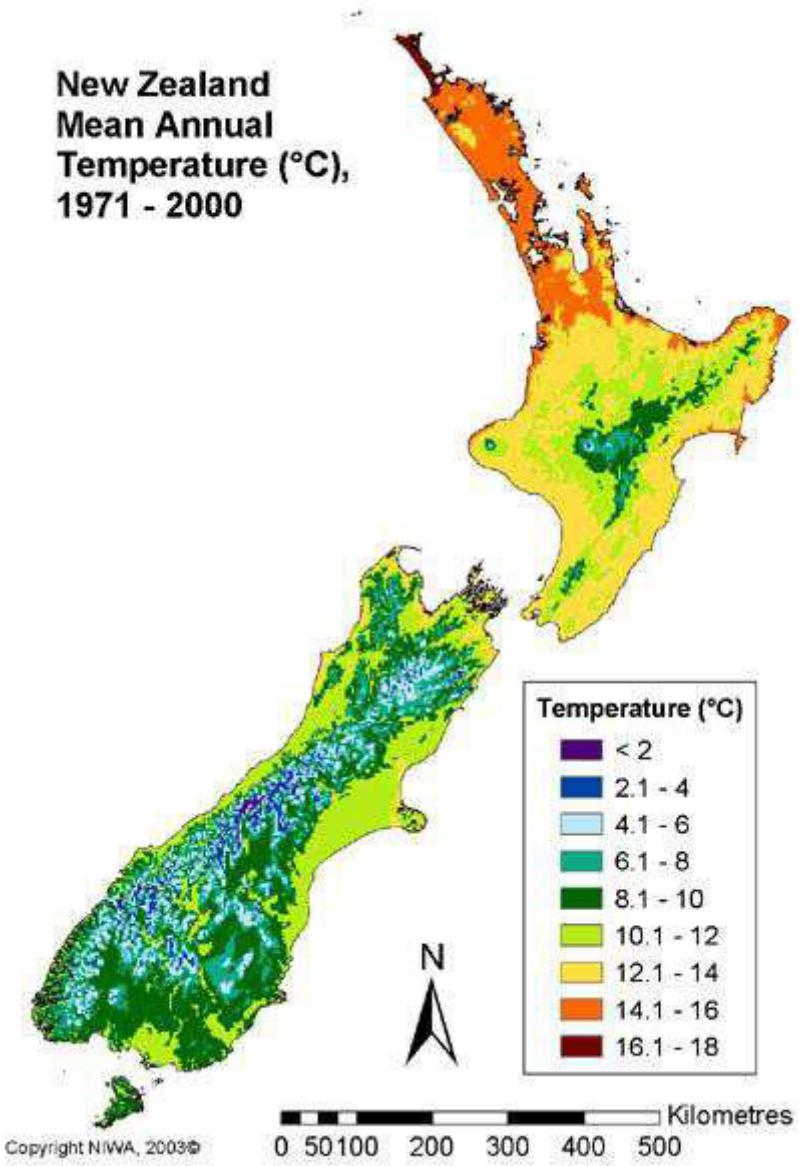
In the first half of the 19th century New Zealand was a "law-free" country, the law only applicable was the law of the jungle.

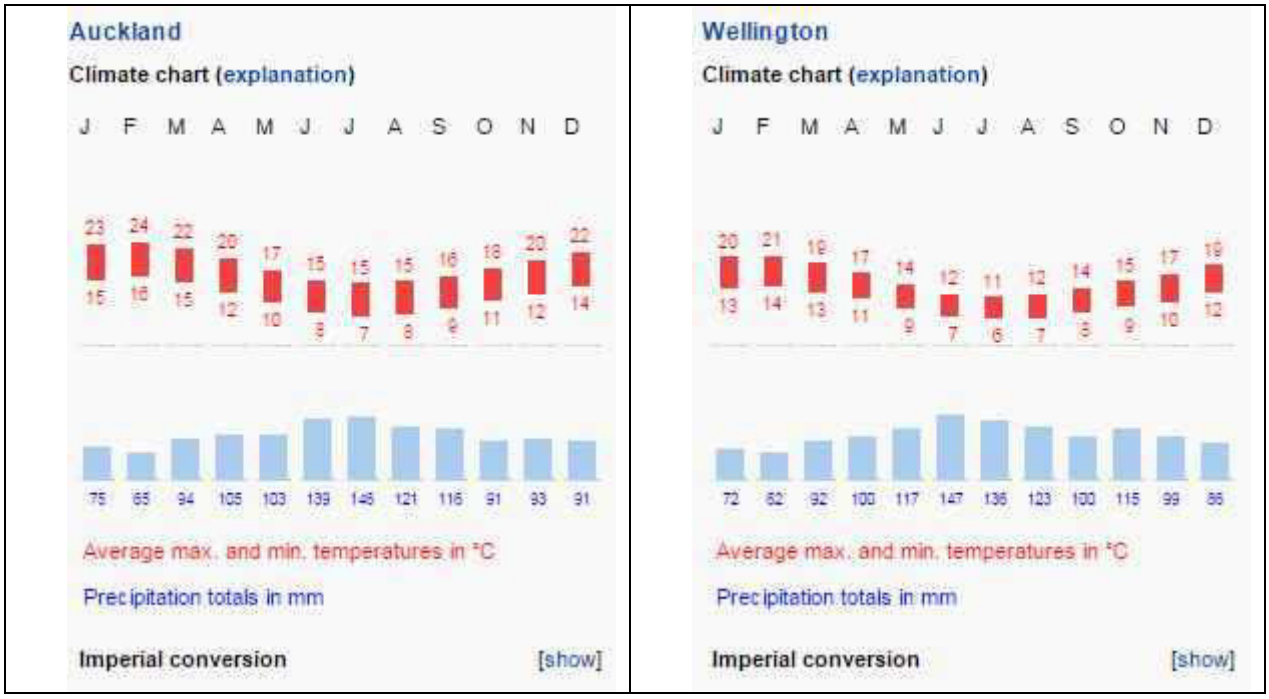
Following a Treaty in 1840 with the Maoris New Zealand became British colony. In 1901 when the Commonwealth of Australia was created New Zealand chose not to join this federation. However the Australian constitution still retains a paragraph for New Zealand to join, if desired.

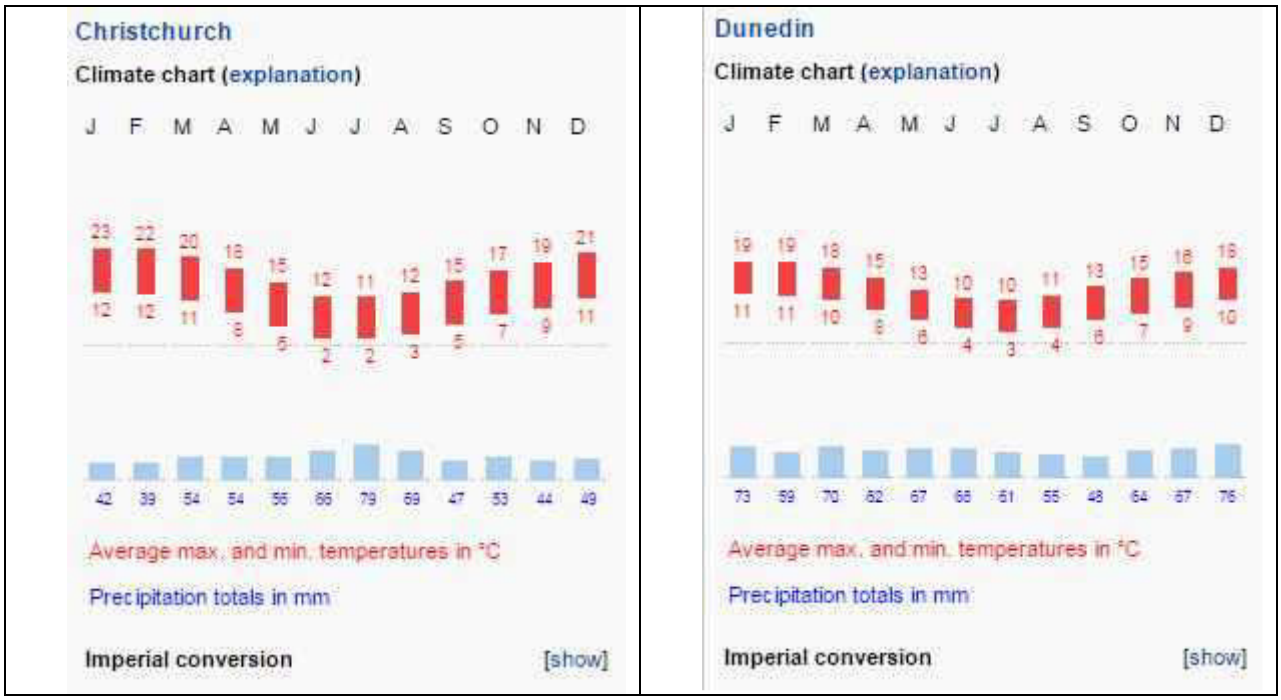
New Zealand today is an independent state, a constitutional monarchy, whose head is the British monarch. From time to time there are republican aspirations and today (2015) ,there is a debate about a new flag without the Union Jack, similar to Canada.

4. Climate

The climatic conditions in New Zealand are particularly affected by the island situation, surrounded by the sea it ensures a maritime climate with a relatively low base difference between winter and summer and on average rather high rainfall. Mean annual temperatures range from 10° C in the south to 16° C in the north. Conditions vary sharply across regions from extremely wet on the West Coast of South Island to almost semi-arid in Central Otago and sub-tropical in Northland. The temperature differences between the cold and warm days of the month are often greater than those between winter and summer. The general snow season is about early June until early October in the South Island. Snowfall is less common on the North Island, although it does occur.







In the north of New Zealand, you can enjoy cycling all year round without any major weather-related restrictions. In the South Island you can basically navigate the paved passes all year round; during the winter months there is an increased risk of rain. A trip between December and February is highly recommended.

5. Flora and fauna

New Zealand's geographic isolation for 60 million years and the biogeography of the islands are responsible for the country's unique species of animals, fungi and plants. They have either evolved from Gondwanan wildlife or the few organisms that have managed to reach the shores flying, swimming or being carried across the dea.

Before the arrival of the Māoris about 80% of the country was covered with forest; today indigenous forests cover only about 23% of the land. Approximately 82% of New Zealand's plant species are endemic. In approximately 5% of the land fast-growing, non-indigenous tree species are grown by the New Zealand forestry organisation. Approximately 10% of the land is covered with native open land vegetation.

An outstanding feature before the Polynesian colonization was the lack of any kind of land mammals. In New Zealand there are no snakes and poisonous insects, such as spiders and scorpions, however, almost 60 lizard species occur in New Zealand. Many of the niches that would normally be occupied by mammals, have been occupied by birds including some flightless birds such as Kakapo, Kiwi, Takahe or the extinct Moa Wekaund ..

The Māori brought with them rats and mice, the Europeans later dogs, cats, hedgehogs, stoats, weasels other species. This produced profound interventions in nature and as a consequence massive extinctions. The New Zealand government and conservationists have pioneered several methods to help threatened wildlife recover including island sanctuaries, pest control, wildlife translocation, fostering and ecological restoration of islands and other selected areas.

6. New Zealand administrative sub-divisions

New Zealand is divided into 16 regions subdivisions used for coding this catalogue (in accordance with ISO 3166-2). These are:

Région	Île	Code (ISO 3166-2 NZ)
Auckland	N	NZ-AUK
Bay of Plenty	N	NZ-CAN
Canterbury	S	NZ-CAN
Gisborne	N	NZ-GIS
Manawatu-Wanganui	N	NZ-MWT
Hawke's Bay	N	NZ-HKB
Marlborough	S	NZ-MBH
Nelson	S	NZ-NSN
Northland	N	NZ-NTL
Otago	S	NZ-OTA
Southland	S	NZ-STL
Taranaki	N	NZ-TKI
Tasman	S	NZ-TAS
Waikato	N	NZ-WKO
Wellington	N	NZ-WGN
West Coast	S	NZ-WTC

Auckland, Gisborne, Marlborough, Nelson and Tasman are Unitary Authorities; the remainder Regional Councils.

In addition the Chatham Islands Territory is defined as a Special Islands Authority.

7. Languages

In New Zealand three languages have the status of an official language: English, Te Reo Māori and New Zealand Sign Language. English is the predominant language spoken by 98% of the population. Māori, an official language since 1987, is now undergoing a process of revitalization and is spoken by 4.1% of the population. New Zealand Sign Language is used by about 28000 people. Many places have both their Māori and English names officially recognized.

8. Definition of "Pass" and the descriptors/feature-names that have been accepted

The "Rules of the Game" of the Club des Cent Cols have been scrupulously respected in putting together this catalogue. "The Catalogue includes all Passes, bearing this name or its local, regional or national equivalent, shown (or having been shown) on cartographic or other documentary sources that the Club considers as reliable" (Rules of the Game).

"In view of the many different types of geographical terrain that can be encountered the minimal definition of the topographical nature of a Pass that has been taken into account by the Club is the following : prominent crossing point of a watershed (other than a summit) dictated by the nature of the terrain" (Annexe to the Rules of the Game.

9. Descriptors that have been accepted as giving a name to a Pass in New Zealand

The primary source for the passes and their attributes has been the web-site, the database and the topographic maps of the (Land Information New Zealand) – the official Government Mapping Agency of New Zealand. Much relevant data can be found at :

http://www.topomap.co.nz

For New Zealand the following generic terms are recognized (which does not necessarily mean that they name passes in all cases) – subject to the topographic criteria of the Rules of the Game.

Descriptor	N° of passes	Meaning
Col	120	A high, narrow, saddle-like pass or depression in a mountain range
Divide	1	Drainage divide on a landmass such that the drainage basin on one side of the divide feeds into one ocean,sea or river, and the basin on the other side feeds into a different ocean,sea or river.
Gap	6	A break or opening in a mountain ridge
Neck	2	Narrow pass in the form of a neck
Pass	181	A natural passageway through high difficult terrain, i.e. a low point between two peaks.
Noti, Nonoti (Maori)	1	The hollow between the summits of two mountain peaks. A saddle.
Tiori, Tarua (Maori)	1	Saddle
Saddle	362	A low point in the crest line of a ridge, commonly between the heads of streams flowing in opposite direction.
Tarahaka (Maori)	1	Saddle

Sources :

New Zealand Geographic Board – Generic Geographic Features Listing – Maori and English 06/14

Edward Shortland: The Southern Districts of New Zealand: a Journal, with Passing Notices of the Customs of the Aborigines. London 1851 (http://nzetc.victoria.ac.nz)

Note: The sum is greater than the number of passes listed because double names exist.

10. Sources and map coordinates

All of the passes listed in this catalogue can be found on the excellent Topographic Maps at 1:50000 of the LINZ (Land Information New Zealand).

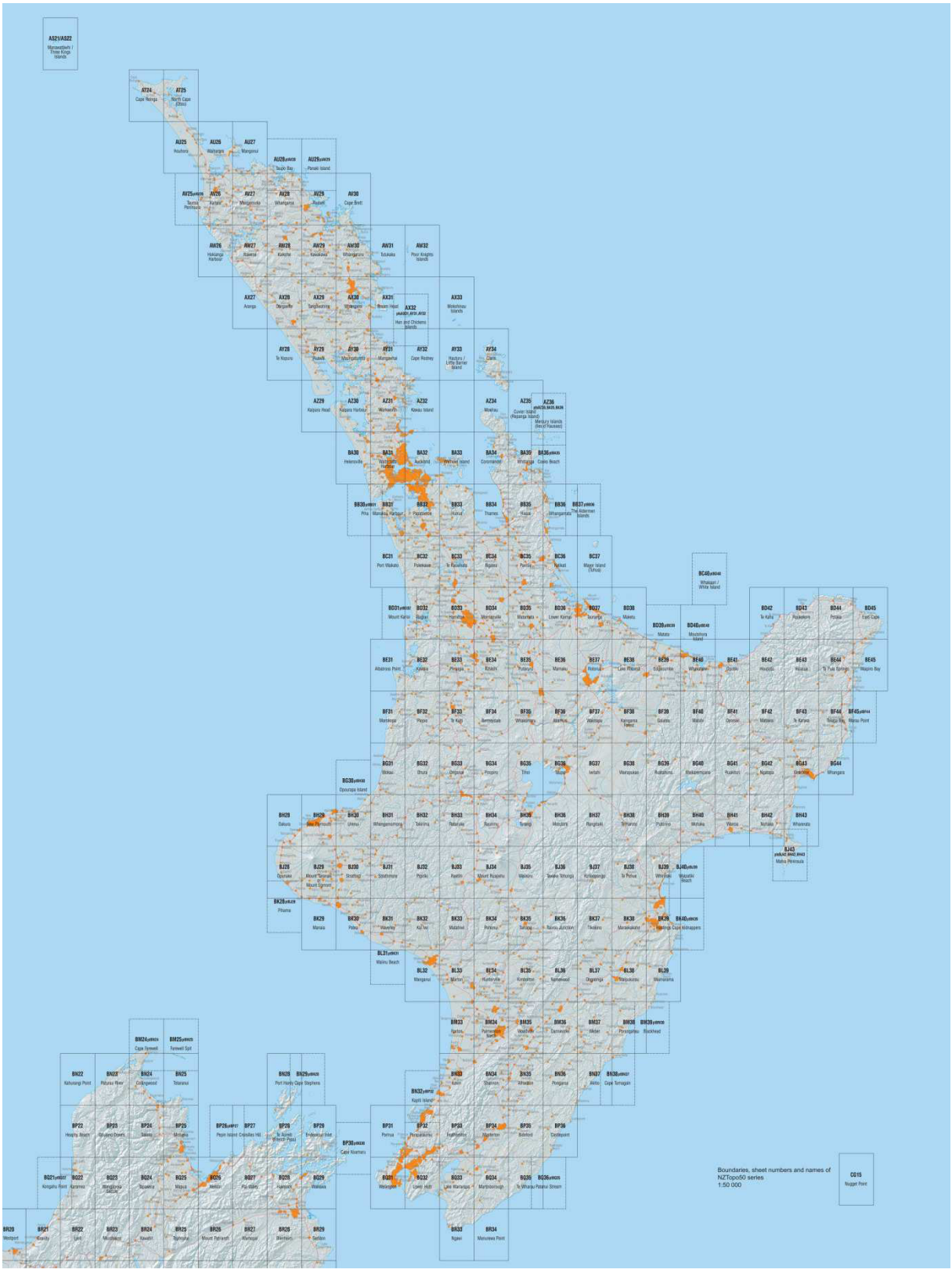
The sheet index diagrams of the 451 sheets of the paper versions are shown below :

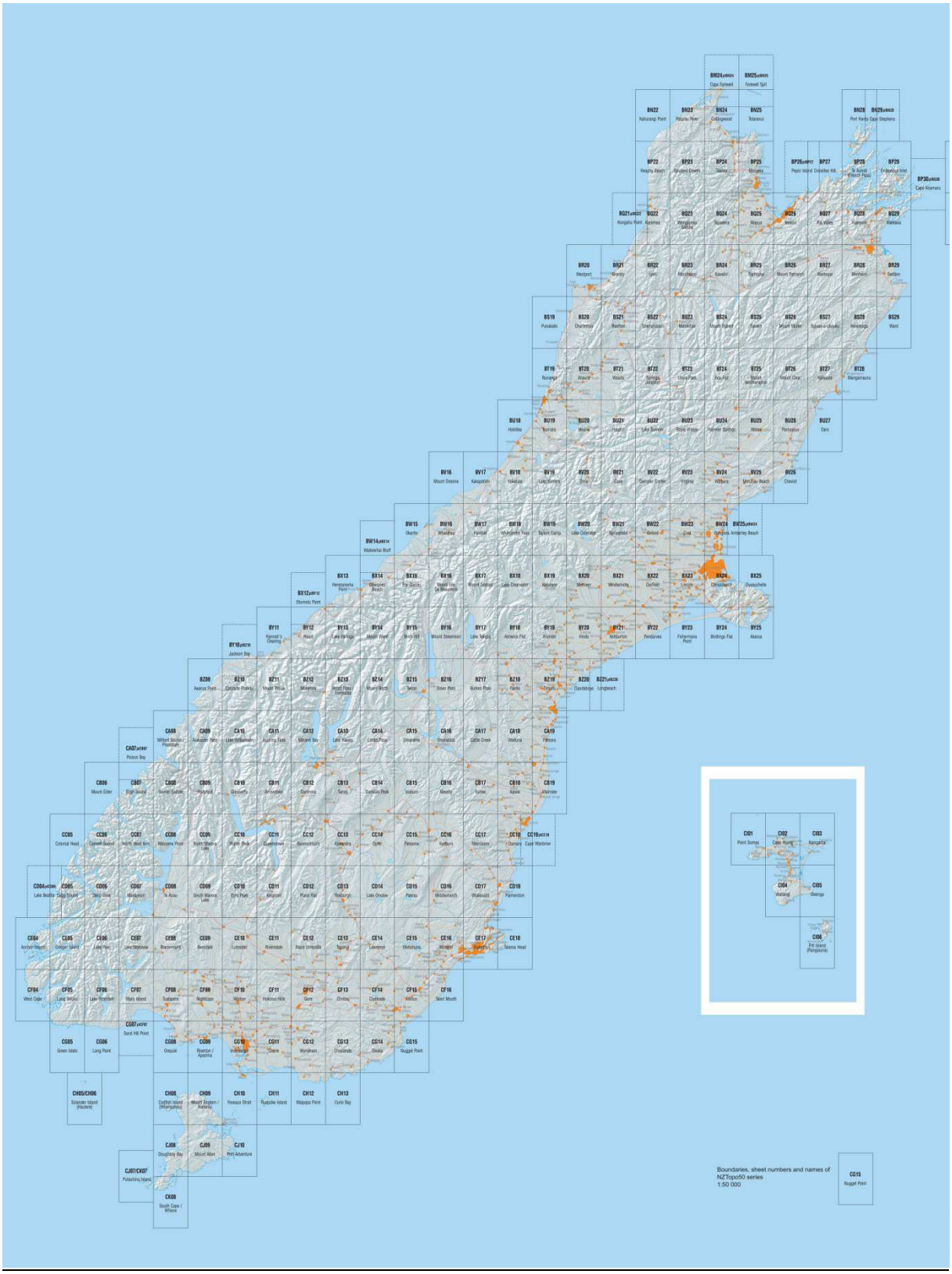
The maps can also be downloaded in giff and geotiff format along with much additional useful information from the web-site mentioned previously :

http://www.topomap.co.nz

An interactive on-line map is also available and this catalogue includes links for each pass that will display each pass on the NZ Topo Map.

Smaller-scale maps that can also be useful for more general touring in New Zealand include the Hema series of atlases at 1:350000.


Boundaries, sheet numbers and names of NZTopo50 series
1:50 000



These maps have a primary grid drawn on them with:

Datum : NZDG2000 (which has replaced NZDG1949)
Projection : New Zealand Transverse Mercator 2000

This latter projection has an origin of Latitude 0° S, Longitude 173° E and a False Northing of 10000000m with a False Easting of 1600000m.

The reason for having a specific Grid for New Zealand in addition to or instead of the universally accepted WGS84 coordinates is that the New Zealand landmass is moving slowly as a result of its volatile geological nature. Accordingly the New Zealand Grid is displaced by around 5cm each year with respect to WGS84 or 75cm (in 2015) since the year 2000. For practical purposes for a cyclist the WGS84 coordinates will be sufficiently accurate.

These maps have a secondary Grid of 5-second intervals of Longitude and Latitude.

11. Some statistics

District	Island	N° of passes	Paved road	Unpaved road	Off-road
Auckland	N	1	0	0	1
Bay of Plenty	N	4	1	0	3
Canterbury	S	269	10	24	235
Hawke's Bay	N	13	0	1	12
Marlborough	S	41	3	7	31
Manawatu-Wanganui	N	11	4	1	6
Nelson	S	7	3	1	3
Otago	S	87	2	6	79
Southland	S	79	2	2	75
Tasman	S	40	3	8	29
Taranaki	N	3	2	1	0
Wellington	N	10	2	0	8
Waikato	N	6	1	0	5
West Coast	S	100	6	3	91
TOTAL		**671**	**39**	**54**	**578**

12. User's Manual for the catalogue – Explanations of the columns

Column header	Description	Printed version
Code	Country + sub-division + initial altitude of the pass. In New Zealand country = "NZ", sub-division = district code and altitude is a 4-digit number. In the case of duplicate altitudes the passes are distinguished from each other by an additional suffix a,b. Beware : the altitude used in the pass' code is the initial altitude when the pass was first included in the catalogue. If the altitude is corrected in a subsequent edition of the catalogue the code will not change - only the column "Alti" will change (see below).	X
Descriptor	Synonymous with "col". This column always includes a tilde (~) which will be replaced by the name of the pass to form a complete name. Multiple names : when a pass has multiple names ("alias") the descriptors, names and complete names are separated from each other by a hard carriage return (for computing aficionados who wish to split out these names, the character is 0x0a).	
Name	Name of the pass. See Multiple Names in the column "Descriptor".	
Complete name	Exactly as the pass appears on the reference map; this name is re-assembled from the descriptor and the name. See Multiple Names in the column "Descriptor".	X
District	ISO 3166-2 code for the Land District.	X –shown as separate sections
Island	N (North) or S (South).	
Alti	Altitude of the geographical pass inn metres as it is marked on the most precise source. This altitude can be corrected in later editions of the catalogue but the altitude included in the pass' code will not change. Hence one should always refer to the column "Alti" for the correct altitude.	X
Documents	Link towards the Cent Cols visualiser which displays the pass on various interactive maps: OpenStreetMap and its derivatives Google Maps Google Streetview	
Link NZ Topo Map	The 1:50000 Interactive Topographic Map from LINZ – Land Information New Zealand – the NZ Mapping organization.	
NZTopo50	The paper sheet of the 1:50000 topographic map from the NZ Mapping organization.	

Column header	Description	Printed version
Access	Road grading in free format as well as the reference of the road/path.	X
Type	Type of road/path 0 = Road, 10 = Track, 15 = Path, 20 = Path unknown or inexistant.	X
Diff.	Difficulty 0 = tarmac on at least one side 1 = rideable 2 = easy pushing of the bike 3 = difficult pushing of the bike 35 = road without grading 40 = bike needing to be carried 50 = acrobatic 99 = not graded but not necessarily impossible to cross	X
Ngh.	Neighbouring land district	X
WGS84 Zone	UTM Zone according to the universal system WGS84. The format is as follows : ff => ff is the zone	
WGS84 UTM x	UTM abscissa ("Easting") of the pass according to the universal system WGS84. This system is used a lot par GPS devices, Google Earth.. The format is as follows : mmm mmm => mmm mmm is the abscissa of the pas within the zone, in metres.	X
WGS84 UTM y	UTM ordinate ("Northing") of the pass according to the universal system WGS84. The format is as follows : mmmm mmm => mmmm mmm is the ordinate of the pass within the zone, in metres	X
NZTM2000 x	Abscissa (Easting) in the New Zealand Transverse Mercator 2000 system	
NZTM2000 y	Ordinate Northing) in the New Zealand Transverse Mercator 2000 system	
WGS84 Lon D	Longitude of the pass in the decimal format of the WGS84 system (directly usable in GPS devices, Google Earth etc).	X
WGS84 Lat D	Latitude of the pass in the decimal format of the WGS84 system (directly usable in GPS devices, Google Earth etc).	X
WGS84 Lon S	Longitude of the pass in the sexagesimal format of the WGS84 system.	
WGS84 Lat S	Latitude of the pass in the sexagesimal format of the WGS84 system.	
Remarks	Possible remarks.	

Authors

For the List of Passes : Graham Cutting, Robert de Rudder

For the Introduction : Graham Cutting, Hubert Becker

PLEASE ADDRESS ANY REMARKS, SUGGESTIONS, CORRECTIONS, PROPOSALS FOR NEW PASSES OR SUPPLEMENTARY INFORMATION TO :

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