

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

KATHERINE (AUSTRALIA)

Altitude: 107 m.

Latitude: 14°27'S Longitude: 132°16'E

Temperature observation period.: 1981-1994 (14)

Rainfall observation period....: 1964-1994 (31)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	29.17	35.00	23.33	39.44	18.89	231.1	174.13
Feb.	28.61	33.89	23.33	40.56	13.89	180.3	149.34
Mar.	28.33	34.44	22.22	40.56	12.78	149.9	157.66
Apr.	26.39	33.89	18.89	41.67	10.56	20.3	127.29
May.	24.45	32.78	16.11	41.11	7.78	7.6	95.49
Jun.	21.39	30.00	12.78	37.78	4.44	2.5	53.84
Jul.	21.67	30.56	12.78	36.11	3.89	0.8	59.05
Aug.	23.33	32.22	14.44	37.22	5.00	0.8	81.95
Sep.	27.50	35.56	19.44	40.56	8.33	5.1	143.51
Oct.	30.56	37.78	23.33	41.67	11.11	27.9	179.76
Nov.	31.11	37.78	24.44	43.89	16.11	76.2	182.74
Dec.	30.28	36.11	24.44	42.22	17.22	198.1	185.65
Year	26.90	34.17	19.63	40.23	10.83	901	1590.4

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	697
Compensated thermicity index.....(Itc):	697
Simple continentality index.....(Ic):	9.7
Diurnality index.....(Id):	17.8
Annual ombrothermic index.....(Io):	2.79
Monthly dry ombrothermic index.....(Iod1):	0.04
Bimonthly dry ombrothermic index.....(Iod2):	0.04
Three monthly dry ombrothermic index.....(Iod3):	0.06
Four monthly dry ombrothermic index.....(Iod4):	0.13
Annual ombro-evaporation index.....(Ioe):	23.27
Annual positive temperature.....(Tp):	3228
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	664
Positive precipitation.....(Pp):	901

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	4	1	0	7	0

Latitudinal Belt...: Eutropical

Continentalty.....: Hyperoceanic - High Subhyperoceanic

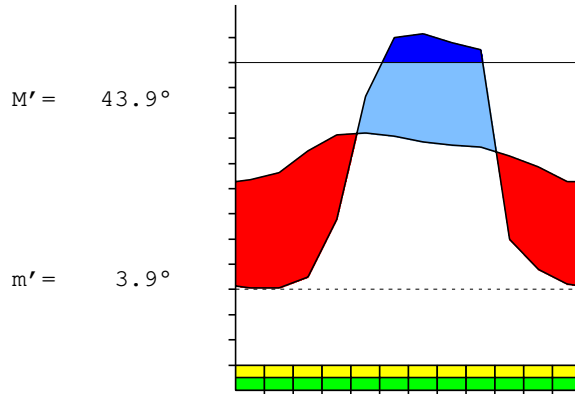
Bioclimate(Variant): TROPICAL XERIC (DRY)

Bioclimatic Belt...: UPPER INFRATROPICAL LOW DRY

KATHERINE (AUSTRALIA)

107 m

P= 901 14° 27' S 132° 16' E 14/31 y.
 T= 26.9° Ic= 9.7 Tp= 3228 Tn= 0
 m= 12.8° M= 30.0° Itc= 697 Io= 2.8



TROPICAL XERIC (DRY)
 UPPER INFRATROPICAL LOW DRY

WATER INDEX CARD KATHERINE (AUSTRALIA)
 Altitude: 107 m. Latitude: 14° 27' S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	21.7	59	1	0	0	1	58	0	0	-0.9
Aug.	23.3	82	1	0	0	1	81	0	0	-0.9
Sep.	27.5	144	5	0	0	5	138	0	0	-0.9
Oct.	30.6	180	28	0	0	28	152	0	0	-0.8
Nov.	31.1	183	76	0	0	76	107	0	0	-0.5
Dec.	30.3	186	198	12	12	186	0	0	0	0.0
Jan.	29.2	174	231	57	69	174	0	0	0	0.3
Feb.	28.6	149	180	31	100	149	0	0	0	0.2
Mar.	28.3	158	150	-8	92	158	0	0	0	0.0
Apr.	26.4	127	20	-92	0	113	15	0	0	-0.8
May.	24.5	95	8	0	0	8	88	0	0	-0.9
Jun.	21.4	54	3	0	0	3	51	0	0	-0.9
Year	26.9	1590	901	*	*	900	690	0	0	*

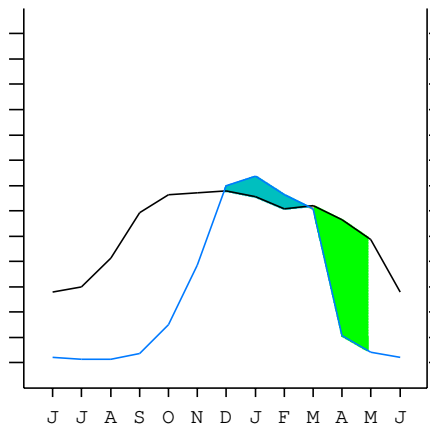
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

KATHERINE (AUSTRALIA)

14°27' S 132°16' E 107 m 14/31 y.

T= 26.9 Ic= 9.7 TROPICAL XERIC (DRY)
 m= 12.8 Tp= 3228 UPPER INFRATROPICAL
 M= 30.0 Tn= 0 LOW DRY
 M' = 43.9 Itc= 697
 m' = 3.9 Io= 2.8
 P= 901 mm ———
 PE= 1590 mm ———

Imbibing	27 Nov.
Saturation	30 Feb.
Reserve Use	24 Feb.
Deficit	26 Apr.



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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [A3a]
 + Type: A. Hyperoceanic
 + Subtype: 3. Subhyperoceanic
 + Variant: a. High
 Thermic types [A2.A1]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 2. Eutropical
 + Thermic type: A. Warm
 + Thermic subtype: 1. Torrid
 Bioclimatic types [A3.1a.5b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 3. XERIC
 + Bioclimatic variant .:
 + Thermic type.....: 1. INFRATROPICAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 5. DRY
 + Ombrothermic subtype : b. LOW
 Bioclimatic Classification: Trxe.Itr.Dry

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 864
 Coldest semester of the year.....(Psw): 37
 Warmest four months period of the year.....(Pcm1): 533
 Following warmest four months period.....(Pcm2): 358
 Positive precipitation dryest 3 months.....(Ppd): 4
 Positive precipitation dryest 2 months.....(Ppd2): 2
 Positive precipitation dryest 1 month.....(Ppd1): 1
 Positive precipitation warmest 3 months.....(Pps): 302
 Positive precipitation warmest 2 months.....(Pps2): 104
 Positive precipitation warmest 1 month.....(Pps1): 76
 Positive precipitation coldest 3 months.....(Ppw): 4
 Positive precipitation coldest 2 months.....(Ppw2): 3
 Positive precipitation coldest 1 month.....(Ppw1): 3

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	4	109	609	177

Tropical rainfall rhythms: 1 > 2 > 4 > 3

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 31.1
 Average coldest month [T].....(Tmin): 21.4
 Maximum temp. warmest month [M].....(Tmmax): 37.8
 Minimum temp. coldest month [m].....(Tmmin): 12.8
 Absolute Max.temp. warmest month [M'].....(Tamax): 43.9
 Absolute Min.temp. coldest month [m'].....(Tamin): 3.9
 First warmest contrasted month [M].....(Tcmax): 30.6 (7)
 First coldest contrasted month [m].....(Tcmin): 12.8 (7)
 Dry station temperature.....(Td): 664
 Positive temperature dryest 3 months.....(Tpd): 664
 Positive temperature dryest 2 months.....(Tpd2): 450
 Positive temperature dryest 1 month.....(Tpd1): 217
 Positive temperature warmest 3 months.....(Tps): 920
 Positive temperature warmest 2 months.....(Tps2): 617
 Positive temperature warmest 1 month.....(Tps1): 311
 Positive temperature coldest 3 months.....(Tpw): 664
 Positive temperature coldest 2 months.....(Tpw2): 431
 Positive temperature coldest 1 month.....(Tpw1): 214

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SEASONAL PARAMETERS

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Warmest semester...(Sms)	o	o	o							o	o	o
Dryest semester....(Smd)				o	o	o	o	o	o			
Warmest 4 months...(Cm1)	o									o	o	o
Dryest 4 months....(Cmd)						o	o	o	o			
Vegetation Activity(Pav)	o	o	o	o	o	o	o	o	o	o	o	o
Ultragelid...[M' <=0] (Pf)												
Hypergelid...[M <=0] (Pf)												
Gelid.....[T <=0] (Pf)												
Subgelid.....[m <=0] (Pf)												
Pregelid.....[m' <=0] (Pf)												
Agelid.....[m' > 0] (Pf)	o	o	o	o	o	o	o	o	o	o	o	o
HiperAgelid..[all>0] (Pf)	o	o	o	o	o	o	o	o	o	o	o	o

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 1.77
 Mediterranean index of January.....(Im1): No
 Mediterranean index of January & February.....(Im2): No
 Mediterranean index of December to February...(Im3): No

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	1981	2311	1803	1499	203	76	25	8	8	51	279	762
Tp	303	292	286	283	264	245	214	217	233	275	306	311
Io (Iom)	6.54	7.92	6.30	5.29	0.77	0.31	0.12	0.04	0.03	0.19	0.91	2.45
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	6095 / 881			1778 / 792			41 / 664			1092 / 892		
Io (Iot)	6.921			2.246			0.062			1.225		
Semesters	December-May						June-November					
Pp(x10)/Tp	7873 / 1672						1133 / 1556					
Io (Iosm)	4.708						0.728					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 9006/3228=2.79 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	1981	2311	1803	1499	203	76	25	8	8	51	279	762
Tp [T*10]	303	292	286	283	264	245	214	217	233	275	306	311
Iom [Pp/Tp]	654	792	630	529	77	31	12	4	3	19	91	245
Avm [200-Iom]	***	***	***	***	123	169	188	196	197	181	109	***
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	6095 / 881			1778 / 792			41 / 664			1092 / 892		
Iot [Pp/Tp]	692			225			6			122		
Avs E[Avm<200]	***			***			581			***		
Lower ultrahyperarid [3]							Upper ultrahyperarid [2]					
Upper hyperarid [1]							Strong upper arid [1]					
Weak upper arid [1]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp):	9.72
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]		45.82
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]		25.92
+ Oceanic (20<CI<40)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)]		1.67
+ Subcontinental (1.1<CI<1.7)		
Rainfall Index of Lang (1925) [R=P/T]		33.48
+ Steppic (40>R>0)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)]		24.41
+ Subhumid (30>Ia>20)		
I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)]		71.25
+ Subhumid (90>Q>50)		
I of Dantin & Revenga (1940) [DR=100*T/P]		2.99
+ Semiarid (3>DR>2)		
Aridity Index of UNEP [I=P/PE]		0.57
+ Subhumid - dry (0.65>I>0.5)		
Potential Erosion I of Fournier (1960) [K=Pi ² /P]		59.30
+ Very low (K<60)		

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate

- + Climate
- + Region
- + Thermic type: 1. Megathermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.85	0.66	0.54	0.06	0.02	0.01	0.00	0.00	0.01	0.08	0.24	0.70
T-E ratio	13.13	12.87	12.75	11.88	11.00	9.63	9.75	10.50	12.38	13.75	14.00	13.63
Precipitation-effectiveness: 31.73						Temperature-efficiency						145.26
Moisture Index [MI=100*(P-PE)/PE]												-43.37
+ D.Semiarid (-66.7<MI<-33.3)												
Index of dryness [DI=100*d/PE]												43.39
+ Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]												0.02
+ No surplus (0<HI<10)												
Potential Evapotranspiration PE												1590.39
+ Megathermic (PE>1440)												

