

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

LONGREACH (AUSTRALIA)

Altitude: 196 m.

Latitude: 23°26'S Longitude: 144°16'E

Temperature observation period.: 1964-1994 (31)

Rainfall observation period....: 1949-1994 (46)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	30.00	37.22	22.78	46.67	6.67	53.3	189.68
Feb.	29.17	36.11	22.22	43.89	7.22	86.4	158.44
Mar.	27.22	34.44	20.00	42.78	8.89	63.5	148.33
Apr.	23.34	31.11	15.56	38.89	3.33	22.9	90.51
May.	18.89	26.67	11.11	35.00	1.67	22.9	48.78
Jun.	15.83	23.33	8.33	33.33	-2.78	22.9	27.50
Jul.	14.73	22.78	6.67	32.78	-2.78	20.3	23.37
Aug.	16.95	25.56	8.33	35.00	0.00	7.6	37.23
Sep.	20.83	29.44	12.22	40.00	2.22	15.2	68.00
Oct.	25.28	33.89	16.67	42.78	3.89	22.9	130.46
Nov.	27.78	36.11	19.44	46.11	10.00	30.5	160.32
Dec.	29.45	37.22	21.67	46.11	6.67	48.3	186.16
Year	23.29	31.16	15.42	40.28	3.75	417	1268.8

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	527
Compensated thermicity index.....(Itc):	527
Simple continentality index.....(Ic):	15.3
Diurnality index.....(Id):	17.2
Annual ombrothermic index.....(Io):	1.49
Monthly dry ombrothermic index.....(Iod1):	0.45
Bimonthly dry ombrothermic index.....(Iod2):	0.60
Three monthly dry ombrothermic index.....(Iod3):	0.82
Four monthly dry ombrothermic index.....(Iod4):	0.97
Annual ombro-evaporation index.....(Ioe):	2.73
Annual positive temperature.....(Tp):	2795
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	525
Positive precipitation.....(Pp):	417

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	0	2	6	4	0

Latitudinal Belt...: Subtropical

Continentalty.....: Oceanic - Low Euoceanic

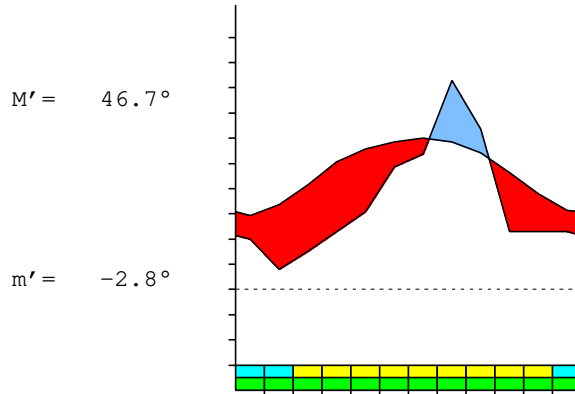
Bioclimate(Variant): TROPICAL XERIC (PLUVISEROTIN, SEMIARID)

Bioclimatic Belt...: UPPER THERMOTROPICAL LOW SEMIARID

LONGREACH (AUSTRALIA)

196 m

P= 417 23° 26'S 144° 16'E 31/46 y.
 T= 23.3° Ic= 15.3 Tp= 2795 Tn= 0
 m= 6.7° M= 22.8° Itc= 527 Io= 1.5



TROPICAL XERIC (PLUVISEROTIN)
 UPPER THERMOTROPICAL LOW SEMIARID

WATER INDEX CARD LONGREACH (AUSTRALIA)
 Altitude: 196 m. Latitude: 23° 26'S

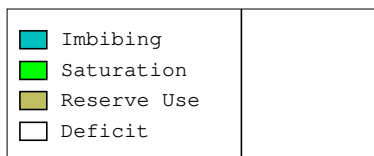
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	14.7	23	20	0	0	20	3	0	0	-0.1
Aug.	17.0	37	8	0	0	8	30	0	0	-0.7
Sep.	20.8	68	15	0	0	15	53	0	0	-0.7
Oct.	25.3	130	23	0	0	23	108	0	0	-0.8
Nov.	27.8	160	31	0	0	31	130	0	0	-0.8
Dec.	29.5	186	48	0	0	48	138	0	0	-0.7
Jan.	30.0	190	53	0	0	53	136	0	0	-0.7
Feb.	29.2	158	86	0	0	86	72	0	0	-0.4
Mar.	27.2	148	64	0	0	64	85	0	0	-0.5
Apr.	23.3	91	23	0	0	23	68	0	0	-0.7
May.	18.9	49	23	0	0	23	26	0	0	-0.5
Jun.	15.8	28	23	0	0	23	5	0	0	-0.1
Year	23.3	1269	417	*	*	417	852	0	0	*

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

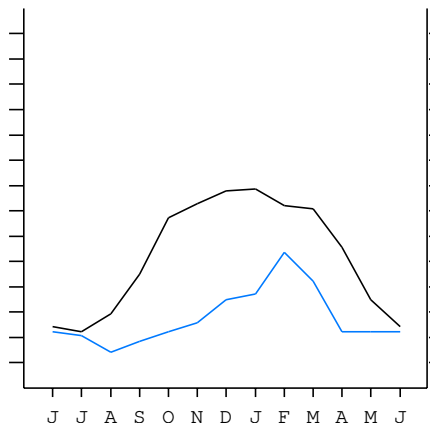
LONGREACH (AUSTRALIA)

23°26'S 144°16'E 196 m 31/46 y.

T= 23.3 Ic= 15.3 TROPICAL XERIC (PLUVISEROTIN)
 m= 6.7 Tp= 2795 UPPER THERMOTROPICAL
 M= 22.8 Tn= 0 LOW SEMIARID
 M' = 46.7 Itc= 527
 m' = -2.8 Io= 1.5
 P= 417 mm ———
 PE= 1269 mm ———



All over the year,
 there is hydric deficit



LONGREACH (AUSTRALIA)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B2b]
 + Type: B. Oceanic
 + Subtype: 2. Euoceanic
 + Variant: b. Low
 Thermic types [A3.A2]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 3. Subtropical
 + Thermic type: A. Warm
 + Thermic subtype: 2. Warm
 Bioclimatic types [A3e.2a.4b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 3. XERIC
 + Bioclimatic variant .: e. PLUVISEROTIN, SEMIARID
 + Thermic type.....: 2. THERMOTROPICAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 4. SEMIARID
 + Ombrothermic subtype : b. LOW
 Bioclimatic Classification: Trxe (Pse).Ttr.Sar

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 305
 Coldest semester of the year.....(Psw): 112
 Warmest four months period of the year.....(Pcm1): 219
 Following warmest four months period.....(Pcm2): 132
 Positive precipitation dryest 3 months.....(Ppd): 43
 Positive precipitation dryest 2 months.....(Ppd2): 23
 Positive precipitation dryest 1 month.....(Ppd1): 8
 Positive precipitation warmest 3 months.....(Pps): 188
 Positive precipitation warmest 2 months.....(Pps2): 102
 Positive precipitation warmest 1 month.....(Pps1): 53
 Positive precipitation coldest 3 months.....(Ppw): 51
 Positive precipitation coldest 2 months.....(Ppw2): 43
 Positive precipitation coldest 1 month.....(Ppw1): 20

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	50	68	188	109

Seasonal rainfall rhythms: S > F > P > W

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 30.0
 Average coldest month [T].....(Tmin): 14.7
 Maximum temp. warmest month [M].....(Tmmax): 37.2
 Minimum temp. coldest month [m].....(Tmmin): 6.7
 Absolute Max.temp. warmest month [M'].....(Tamax): 46.7
 Absolute Min.temp. coldest month [m'].....(Tamin): -2.8
 First warmest contrasted month [M].....(Tcmax): 25.6 (8)
 First coldest contrasted month [m].....(Tcmin): 8.3 (8)
 Dry station temperature.....(Td): 525
 Positive temperature dryest 3 months.....(Tpd): 525
 Positive temperature dryest 2 months.....(Tpd2): 378
 Positive temperature dryest 1 month.....(Tpd1): 170
 Positive temperature warmest 3 months.....(Tps): 886
 Positive temperature warmest 2 months.....(Tps2): 595
 Positive temperature warmest 1 month.....(Tps1): 300
 Positive temperature coldest 3 months.....(Tpw): 475
 Positive temperature coldest 2 months.....(Tpw2): 306
 Positive temperature coldest 1 month.....(Tpw1): 147

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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)						o	o	o				
Agelid.....[m' > 0] (Pf)	o	o	o	o	o				o	o	o	o
HiperAgelid..[all>0] (Pf)	o	o	o	o	o				o	o	o	o

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 3.04
 Mediterranean index of January.....(Im1): 3.56
 Mediterranean index of January & February.....(Im2): 2.49
 Mediterranean index of December to February...(Im3): 2.84

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	483	533	864	635	229	229	229	203	76	152	229	305
Tp	295	300	292	272	233	189	158	147	170	208	253	278
Io (Iom)	1.64	1.78	2.96	2.33	0.98	1.21	1.45	1.38	0.45	0.73	0.91	1.10
Seasons	Summer			Autumn			Winter			Spring		
Pp(x10)/Tp	1880 / 886			1093 / 694			508 / 475			686 / 739		
Io (Iot)	2.121			1.574			1.069			0.928		
Semesters	December-May						June-November					
Pp(x10)/Tp	2973 / 1581						1194 / 1214					
Io (Iosm)	1.881						0.984					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 4167/2795=1.49 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	483	533	864	635	229	229	229	203	76	152	229	305
Tp [T*10]	295	300	292	272	233	189	158	147	170	208	253	278
Iom [Pp/Tp]	164	178	296	233	98	121	145	138	45	73	91	110
Avm [200-Iom]	36	22	***	***	102	79	55	62	155	127	109	90
Seasons	Summer			Autumn			Winter			Spring		
Pp / Tp	1880 / 886			1093 / 694			508 / 475			686 / 739		
Iot [Pp/Tp]	212			157			107			93		
Avs E[Avm<200]	***			***			273			327		
Strong lower arid [1]						Strong upper arid [1]						
Weak upper arid [3]						Strong lower semiarid [2]						
Weak lower semiarid [3]						Strong upper semiarid [1]						
Weak upper semiarid [1]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 15.27
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 44.88
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 33.12
 + Oceanic (20<CI<40)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 1.73
 + Continental (1.7<CI<2.3)
 Rainfall Index of Lang (1925) [R=P/T]: 17.89
 + Steppic (40>R>0)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 12.52
 + Arid -steppic- (15>Ia>5)
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: 31.08
 + Semiarid (50>Q>30)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 5.59
 + Arid (6>DR>3)
 Aridity Index of UNEP [I=P/PE]: 0.33
 + Semiarid (0.5>Im>0.2)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 17.91
 + Very low (K<60)

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate: A. Warm and temperate warm
 + Region:
 + Thermic type: 2. Macrothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.16	0.29	0.21	0.07	0.08	0.09	0.08	0.03	0.05	0.07	0.09	0.15
T-E ratio	13.50	13.13	12.25	10.50	8.50	7.12	6.63	7.63	9.37	11.38	12.50	13.25
Precipitation-effectiveness: 13.82						Temperature-efficiency: 125.76						
Moisture Index [MI=100*(P-PE)/PE]: -67.16 + E.Dry (-110<MI<-66.7)												
Index of dryness [DI=100*d/PE]: 67.15 + Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]: 0.00 + No surplus (0<HI<10)												
Potential Evapotranspiration PE: 1268.77 + Forth mesothermic (997<PE<1440)												

