

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

ERNABELLA (AUSTRALIA)

Altitude: 762 m.

Latitude: 26°17'S Longitude: 132°8'E

Temperature observation period.: 1982-1994 (13)

Rainfall observation period....: 1977-1994 (18)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	26.67	33.89	19.44	43.33	9.44	40.6	160.13
Feb.	25.56	32.78	18.33	41.11	6.11	45.7	126.32
Mar.	23.34	30.56	16.11	39.44	6.11	20.3	108.68
Apr.	18.89	26.11	11.67	36.67	0.56	15.2	63.96
May.	13.89	20.56	7.22	31.11	-1.67	22.9	33.02
Jun.	11.11	18.33	3.89	27.22	-5.00	22.9	19.41
Jul.	10.27	17.22	3.33	27.78	-6.11	10.2	17.23
Aug.	12.50	20.56	4.44	33.33	-5.00	7.6	27.35
Sep.	16.95	25.00	8.89	35.00	-2.22	7.6	53.17
Oct.	20.28	27.78	12.78	38.89	2.22	20.3	85.74
Nov.	23.61	31.11	16.11	40.56	6.11	20.3	118.74
Dec.	26.94	34.44	19.44	42.22	9.44	27.9	165.44
Year	19.17	26.53	11.80	36.39	1.67	262	979.19

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	397
Compensated thermicity index.....(Itc):	397
Simple continentality index.....(Ic):	16.7
Diurnality index.....(Id):	16.1
Annual ombrothermic index.....(Io):	1.14
Monthly dry ombrothermic index.....(Iod1):	0.61
Bimonthly dry ombrothermic index.....(Iod2):	0.52
Three monthly dry ombrothermic index.....(Iod3):	0.64
Four monthly dry ombrothermic index.....(Iod4):	0.95
Annual ombro-evaporation index.....(Ioe):	2.03
Annual positive temperature.....(Tp):	2300
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	397
Positive precipitation.....(Pp):	262

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	0	1	5	6	0

Latitudinal Belt...: Subtropical

Continentalty.....: Oceanic - Low Euoceanic

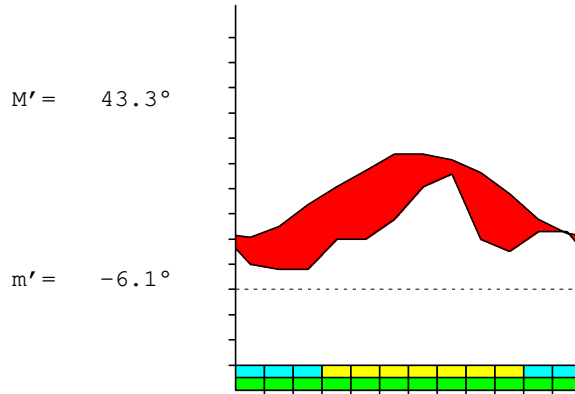
Bioclimate(Variant): TROPICAL XERIC (SEMIARID)

Bioclimatic Belt...: LOW MESOTROPICAL LOW SEMIARID

ERNABELLA (AUSTRALIA)

762 m

P= 262 26° 17' S 132° 8' E 13/18 y.
 T= 19.2° Ic= 16.7 Tp= 2300 Tn= 0
 m= 3.3° M= 17.2° Itc= 397 Io= 1.1



TROPICAL XERIC (SEMIARID)
 LOW MESOTROPICAL LOW SEMIARID

WATER INDEX CARD ERNABELLA (AUSTRALIA)
 Altitude: 762 m. Latitude: 26° 17' S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	10.3	17	10	-3	0	14	4	0	0	-0.4
Aug.	12.5	27	8	0	0	8	20	0	0	-0.7
Sep.	17.0	53	8	0	0	8	46	0	0	-0.8
Oct.	20.3	86	20	0	0	20	65	0	0	-0.7
Nov.	23.6	119	20	0	0	20	98	0	0	-0.8
Dec.	26.9	165	28	0	0	28	138	0	0	-0.8
Jan.	26.7	160	41	0	0	41	120	0	0	-0.7
Feb.	25.6	126	46	0	0	46	81	0	0	-0.6
Mar.	23.3	109	20	0	0	20	88	0	0	-0.8
Apr.	18.9	64	15	0	0	15	49	0	0	-0.7
May.	13.9	33	23	0	0	23	10	0	0	-0.3
Jun.	11.1	19	23	3	3	19	0	0	0	0.1
Year	19.2	979	262	*	*	261	718	0	0	*

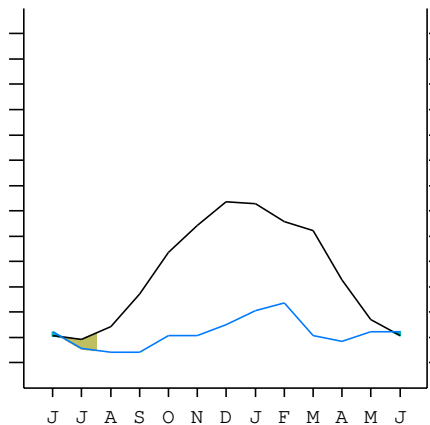
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

ERNABELLA (AUSTRALIA)

26°17' S 132°8' E 762 m 13/18 y.

T= 19.2 Ic= 16.7 TROPICAL XERIC (SEMIARID)
 m= 3.3 Tp= 2300 LOW MESOTROPICAL
 M= 17.2 Tn= 0 LOW SEMIARID
 M' = 43.3 Itc= 397
 m' = -6.1 Io= 1.1
 P= 262 mm ———
 PE= 979 mm ———

Imbibing	23 May.
Saturation	10 Jun.
Reserve Use	15 Jul.
Deficit	



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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 [A3.3b.4b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 3. XERIC
 + Bioclimatic variant ..:
 + Thermic type.....: 3. MESOTROPICAL
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 4. SEMIARID
 + Ombrothermic subtype : b. LOW
 Bioclimatic Classification: Trxe.Mtr.Sar

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 175
 Coldest semester of the year.....(Psw): 86
 Warmest four months period of the year.....(Pcm1): 135
 Following warmest four months period.....(Pcm2): 81
 Positive precipitation dryest 3 months.....(Ppd): 25
 Positive precipitation dryest 2 months.....(Ppd2): 15
 Positive precipitation dryest 1 month.....(Ppd1): 8
 Positive precipitation warmest 3 months.....(Pps): 114
 Positive precipitation warmest 2 months.....(Pps2): 69
 Positive precipitation warmest 1 month.....(Pps1): 28
 Positive precipitation coldest 3 months.....(Ppw): 41
 Positive precipitation coldest 2 months.....(Ppw2): 33
 Positive precipitation coldest 1 month.....(Ppw1): 10

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	40	48	114	58

Seasonal rainfall rhythms: S > F > P > W

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 26.9
 Average coldest month [T].....(Tmin): 10.3
 Maximum temp. warmest month [M].....(Tmmax): 34.4
 Minimum temp. coldest month [m].....(Tmmin): 3.3
 Absolute Max.temp. warmest month [M'].....(Tamax): 43.3
 Absolute Min.temp. coldest month [m'].....(Tamin): -6.1
 First warmest contrasted month [M].....(Tcmax): 20.6 (8)
 First coldest contrasted month [m].....(Tcmin): 4.4 (8)
 Dry station temperature.....(Td): 397
 Positive temperature dryest 3 months.....(Tpd): 397
 Positive temperature dryest 2 months.....(Tpd2): 295
 Positive temperature dryest 1 month.....(Tpd1): 125
 Positive temperature warmest 3 months.....(Tps): 792
 Positive temperature warmest 2 months.....(Tps2): 536
 Positive temperature warmest 1 month.....(Tps1): 269
 Positive temperature coldest 3 months.....(Tpw): 339
 Positive temperature coldest 2 months.....(Tpw2): 214
 Positive temperature coldest 1 month.....(Tpw1): 103

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

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 3.74
 Mediterranean index of January.....(Im1): 3.94
 Mediterranean index of January & February.....(Im2): 3.32
 Mediterranean index of December to February...(Im3): 3.96

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	279	406	457	203	152	229	229	102	76	76	203	203
Tp	269	267	256	233	189	139	111	103	125	170	203	236
Io (Iom)	1.04	1.52	1.79	0.87	0.80	1.65	2.06	0.99	0.61	0.45	1.00	0.86
Seasons	Summer			Autumn			Winter			Spring		
Pp(x10)/Tp	1142 / 792			584 / 561			407 / 339			482 / 608		
Io (Iot)	1.442			1.041			1.201			0.792		
Semesters	December-May						June-November					
Pp(x10)/Tp	1726 / 1353						889 / 947					
Io (Iosm)	1.276						0.939					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 2615/2300=1.14 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	279	406	457	203	152	229	229	102	76	76	203	203
Tp [T*10]	269	267	256	233	189	139	111	103	125	170	203	236
Iom [Pp/Tp]	104	152	179	87	80	165	206	99	61	45	100	86
Avm [200-Iom]	96	48	21	113	120	35	***	101	139	155	100	114
Seasons	Summer			Autumn			Winter			Spring		
Pp / Tp	1142 / 792			584 / 561			407 / 339			482 / 608		
Iot [Pp/Tp]	144			104			120			79		
Avs E[Avm<200]	165			268			***			369		
Strong lower arid [1]							Weak lower arid [1]					
Strong upper arid [1]							Weak upper arid [4]					
Strong lower semiarid [3]							Weak lower semiarid [1]					
Strong upper semiarid [2]							Weak upper semiarid [1]					

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp):	16.67
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]		43.60
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]		33.89
+ Oceanic (20<CI<40)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)]		1.71
+ Continental (1.7<CI<2.3)		
Rainfall Index of Lang (1925) [R=P/T]		13.64
+ Steppic (40>R>0)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)]		8.97
+ Arid -steppic- (15>Ia>5)		
I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)]		22.25
+ Arid (30>Q>0)		
I of Dantin & Revenga (1940) [DR=100*T/P]		7.33
+ Extremely arid (DR>6)		
Aridity Index of UNEP [I=P/PE]		0.27
+ Semiarid (0.5>Im>0.2)		
Potential Erosion I of Fournier (1960) [K=Pi ² /P]		7.99
+ Very low (K<60)		

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate

- + Climate
- + Region
- + Thermic type: 2. Macrothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.13	0.15	0.07	0.05	0.10	0.10	0.04	0.03	0.03	0.07	0.06	0.09
T-E ratio	12.00	11.50	10.50	8.50	6.25	5.00	4.62	5.63	7.63	9.13	10.62	12.12
Precipitation-effectiveness:	9.21					Temperature-efficiency						
Moisture Index [MI=100*(P-PE)/PE]												
+ E.Dry (-110<MI<-66.7)												
Index of dryness [DI=100*d/PE]												
+ Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]												
+ No surplus (0<HI<10)												
Potential Evapotranspiration PE												
+ Third mesothermic (855<PE<997)												

