

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

DARWIN (AUSTRALIA)

Altitude: 30 m.

Latitude: 12°28'S Longitude: 130°51'E

Temperature observation period.: 1920-1980 (61)

Rainfall observation period....: 1950-1980 (31)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	28.70	32.20	25.00	37.80	20.40	411.0	168.42
Feb.	28.60	32.20	25.00	38.30	17.20	314.0	147.74
Mar.	28.70	32.80	25.00	38.90	19.20	284.0	160.76
Apr.	28.80	33.30	24.40	40.00	16.00	78.0	150.83
May.	27.40	32.80	22.80	39.00	15.10	8.0	142.70
Jun.	25.80	31.10	20.60	37.00	12.90	2.0	108.86
Jul.	25.10	30.60	19.40	36.70	10.40	0.0	100.81
Aug.	26.20	31.70	21.10	36.70	13.90	1.0	124.86
Sep.	28.10	32.80	23.30	38.90	17.20	15.0	148.31
Oct.	29.40	33.90	25.00	40.50	20.30	49.0	169.82
Nov.	29.80	34.40	25.60	39.60	19.30	110.0	170.01
Dec.	29.40	33.30	25.60	38.90	20.30	218.0	176.17
Year	28.00	32.59	23.57	38.53	16.85	1490	1769.3

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	780
Compensated thermicity index.....(Itc):	780
Simple continentality index.....(Ic):	4.7
Diurnality index.....(Id):	11.2
Annual ombrothermic index.....(Io):	4.43
Monthly dry ombrothermic index.....(Iod1):	No
Bimonthly dry ombrothermic index.....(Iod2):	0.02
Three monthly dry ombrothermic index.....(Iod3):	0.04
Four monthly dry ombrothermic index.....(Iod4):	0.11
Annual ombro-evaporation index.....(Ioe):	13.33
Annual positive temperature.....(Tp):	3360
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	771
Positive precipitation.....(Pp):	1490

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

Latitudinal Belt...: Eutropical

Continentalty.....: Hyperoceanic - High Euhyperoceanic

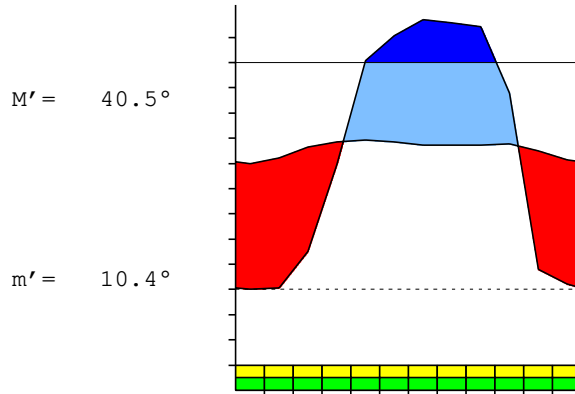
Bioclimate(Variant): TROPICAL PLUVISEASONAL (XEROPHYTIC)

Bioclimatic Belt...: UPPER INFRATROPICAL LOW SUBHUMID

DARWIN (AUSTRALIA)

30 m

P= 1490 12° 28' S 130° 51' E 61/31 y.
 T= 28.0° Ic= 4.7 Tp= 3360 Tn= 0
 m= 19.4° M= 30.6° Itc= 780 Io= 4.4



TROPICAL PLUVISEASONAL (XEROPHYTIC)
 UPPER INFRATROPICAL LOW SUBHUMID

WATER INDEX CARD

DARWIN (AUSTRALIA)

Altitude: 30 m.

Latitude: 12° 28' S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	25.1	101	0	0	0	0	101	0	8	-1.0
Aug.	26.2	125	1	0	0	1	124	0	4	-0.9
Sep.	28.1	148	15	0	0	15	133	0	2	-0.8
Oct.	29.4	170	49	0	0	49	121	0	1	-0.7
Nov.	29.8	170	110	0	0	110	60	0	0	-0.3
Dec.	29.4	176	218	42	42	176	0	0	0	0.2
Jan.	28.7	168	411	58	100	168	0	184	92	1.4
Feb.	28.6	148	314	0	100	148	0	166	129	1.1
Mar.	28.7	161	284	0	100	161	0	123	126	0.7
Apr.	28.8	151	78	-73	27	151	0	0	63	-0.4
May.	27.4	143	8	-27	0	35	108	0	32	-0.9
Jun.	25.8	109	2	0	0	2	107	0	16	-0.9
Year	28.0	1769	1490	*	*	1016	753	474	474	*

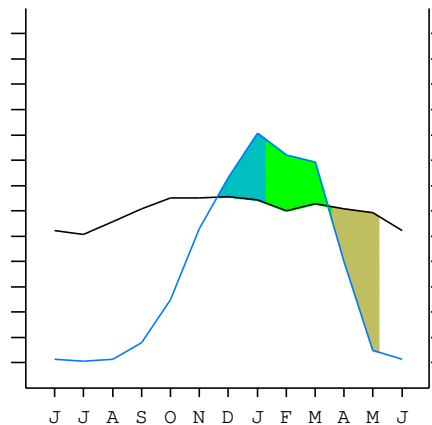
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

DARWIN (AUSTRALIA)

12°28' S 130°51' E 30 m 61/31 y.

T= 28.0 Ic= 4.7 TROPICAL PLUVISEASONAL (XEROPHYTIC)
 m= 19.4 Tp= 3360 UPPER INFRATROPICAL
 M= 30.6 Tn= 0 LOW SUBHUMID
 M' = 40.5 Itc= 780
 m' = 10.4 Io= 4.4
 P= 1490 mm ———
 PE= 1769 mm ———

Imbibing	18 Nov.
Saturation	8 Jan.
Reserve Use	19 Mar.
Deficit	7 May.



DARWIN (AUSTRALIA)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [A2a]
 + Type: A. Hyperoceanic
 + Subtype: 2. Euhyperoceanic
 + 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 [A4.1a.6b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 4. PLUVISEASONAL
 + Bioclimatic variant .:
 + Thermic type.....: 1. INFRATROPICAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 6. SUBHUMID
 + Ombrothermic subtype : b. LOW

Bioclimatic Classification: Trde.Itr.Shu

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 1386
 Coldest semester of the year.....(Psw): 104
 Warmest four months period of the year.....(Pcm1): 788
 Following warmest four months period.....(Pcm2): 684
 Positive precipitation dryest 3 months.....(Ppd): 3
 Positive precipitation dryest 2 months.....(Ppd2): 1
 Positive precipitation dryest 1 month.....(Ppd1): 0
 Positive precipitation warmest 3 months.....(Pps): 377
 Positive precipitation warmest 2 months.....(Pps2): 159
 Positive precipitation warmest 1 month.....(Pps1): 110
 Positive precipitation coldest 3 months.....(Ppw): 3
 Positive precipitation coldest 2 months.....(Ppw2): 2
 Positive precipitation coldest 1 month.....(Ppw1): 0

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	3	174	943	370

Tropical rainfall rhythms: 1 > 2 > 4 > 3

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 29.8
 Average coldest month [T].....(Tmin): 25.1
 Maximum temp. warmest month [M].....(Tmmax): 34.4
 Minimum temp. coldest month [m].....(Tmmin): 19.4
 Absolute Max.temp. warmest month [M'].....(Tamax): 40.5
 Absolute Min.temp. coldest month [m'].....(Tamin): 10.4
 First warmest contrasted month [M].....(Tcmax): 30.6 (7)
 First coldest contrasted month [m].....(Tcmin): 19.4 (7)
 Dry station temperature.....(Td): 771
 Positive temperature dryest 3 months.....(Tpd): 771
 Positive temperature dryest 2 months.....(Tpd2): 513
 Positive temperature dryest 1 month.....(Tpd1): 251
 Positive temperature warmest 3 months.....(Tps): 886
 Positive temperature warmest 2 months.....(Tps2): 592
 Positive temperature warmest 1 month.....(Tps1): 298
 Positive temperature coldest 3 months.....(Tpw): 771
 Positive temperature coldest 2 months.....(Tpw2): 509
 Positive temperature coldest 1 month.....(Tpw1): 251

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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): 1.19
 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)	2180	4110	3140	2840	780	80	20	0	10	150	490	1100
Tp	294	287	286	287	288	274	258	251	262	281	294	298
Io (Iom)	7.41	14.3	11.0	9.90	2.71	0.29	0.08	0.00	0.04	0.53	1.67	3.69
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	9430 / 867			3700 / 849			30 / 771			1740 / 873		
Io (Iot)	10.88			4.358			0.039			1.993		
Semesters	December-May						June-November					
Pp(x10)/Tp	13130 / 1716						1770 / 1644					
Io (Iosm)	7.652						1.077					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 14900/3360=4.43 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	2180	4110	3140	2840	780	80	20	0	10	150	490	1100
Tp [T*10]	294	287	286	287	288	274	258	251	262	281	294	298
Iom [Pp/Tp]	741	\$\$\$	\$\$\$	990	271	29	8	0	4	53	167	369
Avm [200-Iom]	***	***	***	***	***	171	192	200	196	147	33	***
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	9430 / 867			3700 / 849			30 / 771			1740 / 873		
Iot [Pp/Tp]	1088			436			4			199		
Avs E[Avm<200]	***			***			588			***		
Lower ultrahyperarid [4]						Lower hyperarid [1]						
Weak lower arid [1]						Strong upper semiarid [1]						

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 4.70
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 16.61
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 6.91
 + Hyperoceanic (-20<CI<20)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 0.91
 + Oceanic (0.6<CI<1.1)
 Rainfall Index of Lang (1925) [R=P/T]: 53.21
 + Semiarid (60>R>40)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 39.21
 + Humid (60>Ia>30)
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: 184.63
 + Humid (Q>90)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 1.88
 + Humid (2>DR>0)
 Aridity Index of UNEP [I=P/PE]: 0.84
 + Humid (I>0.65)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 113.37
 + Moderate (90<K<120)

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate: A. Warm and temperate warm
 + Region: 3. Termoxeroteric (Mediterranean warm)
 + Thermic type: 1. Megathermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	1.63	1.21	1.08	0.26	0.02	0.00	0.00	0.00	0.04	0.15	0.37	0.80
T-E ratio	12.92	12.87	12.92	12.96	12.33	11.61	11.30	11.79	12.65	13.23	13.41	13.23
Precipitation-effectiveness:	55.78					Temperature-efficiency: 151.20						
Moisture Index [MI=100*(P-PE)/PE]: -15.79 + C1.Subhumid dry (-33.3<MI<0)												
Index of dryness [DI=100*d/PE]: 42.57 + Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]: 26.78 + Strong surplus (20<HI)												
Potential Evapotranspiration PE: 1769.29 + Megathermic (PE>1440)												

