

Phytosociological Research Center

www.globalbioclimatics.org

Worldwide Bioclimatic Classification System

Prof.Dr. Salvador Rivas-Martinez

(Adapted to Synoptical Table 30/08/2017)

NULLAGINE (AUSTRALIA)

Altitude: 386 m.

Latitude: 21°53'S Longitude: 120°5'E

Temperature observation period.: 1950-1994 (45)

Rainfall observation period....: 1961-1994 (34)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	31.67	39.44	23.89	47.22	15.56	76.2	203.41
Feb.	31.11	38.33	23.89	46.11	14.44	61.0	172.40
Mar.	29.17	36.67	21.67	43.89	11.11	55.9	164.71
Apr.	25.00	32.78	17.22	42.22	5.00	20.3	107.62
May.	20.00	27.78	12.22	35.00	0.56	17.8	51.80
Jun.	16.39	23.89	8.89	32.22	-2.78	22.9	25.80
Jul.	15.27	23.33	7.22	32.78	-2.22	12.7	21.44
Aug.	17.78	26.67	8.89	35.00	-1.11	7.6	36.91
Sep.	21.67	31.11	12.22	38.89	0.56	0.8	70.65
Oct.	25.84	35.00	16.67	44.44	5.56	5.1	137.21
Nov.	29.72	38.33	21.11	45.56	9.44	12.7	177.40
Dec.	31.39	39.44	23.33	45.00	13.33	43.2	202.58
Year	24.58	32.73	16.43	40.69	5.79	336	1371.9

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	551
Compensated thermicity index.....(Itc):	551
Simple continentality index.....(Ic):	16.4
Diurnality index.....(Id):	18.9
Annual ombrothermic index.....(Io):	1.14
Monthly dry ombrothermic index.....(Iod1):	0.04
Bimonthly dry ombrothermic index.....(Iod2):	0.12
Three monthly dry ombrothermic index.....(Iod3):	0.21
Four monthly dry ombrothermic index.....(Iod4):	0.33
Annual ombro-evaporation index.....(Ioe):	3.10
Annual positive temperature.....(Tp):	2950
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	653
Positive precipitation.....(Pp):	336

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

Latitudinal Belt...: Eutropical

Continentalty.....: Oceanic - Low Euoceanic

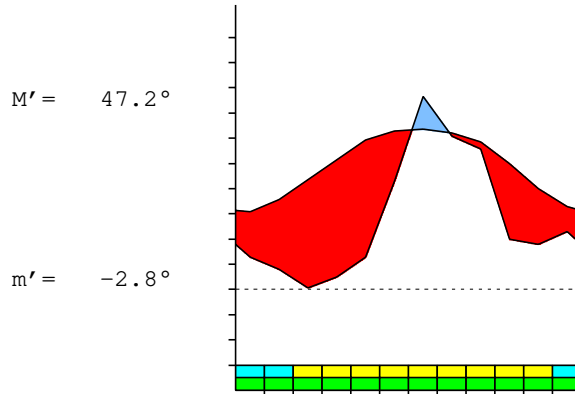
Bioclimate(Variant): TROPICAL XERIC (SEMIARID)

Bioclimatic Belt...: UPPER THERMOTROPICAL LOW SEMIARID

NULLAGINE (AUSTRALIA)

386 m

P= 336 21° 53'S 120° 5'E 45/34 y.
 T= 24.6° Ic= 16.4 Tp= 2950 Tn= 0
 m= 7.2° M= 23.3° Itc= 551 Io= 1.1



TROPICAL XERIC (SEMIARID)
 UPPER THERMOTROPICAL LOW SEMIARID

WATER INDEX CARD NULLAGINE (AUSTRALIA)
 Altitude: 386 m. Latitude: 21° 53'S

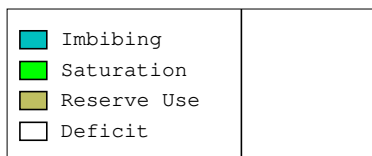
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	15.3	21	13	0	0	13	9	0	0	-0.4
Aug.	17.8	37	8	0	0	8	29	0	0	-0.7
Sep.	21.7	71	1	0	0	1	70	0	0	-0.9
Oct.	25.8	137	5	0	0	5	132	0	0	-0.9
Nov.	29.7	177	13	0	0	13	165	0	0	-0.9
Dec.	31.4	203	43	0	0	43	159	0	0	-0.7
Jan.	31.7	203	76	0	0	76	127	0	0	-0.6
Feb.	31.1	172	61	0	0	61	111	0	0	-0.6
Mar.	29.2	165	56	0	0	56	109	0	0	-0.6
Apr.	25.0	108	20	0	0	20	87	0	0	-0.8
May.	20.0	52	18	0	0	18	34	0	0	-0.6
Jun.	16.4	26	23	0	0	23	3	0	0	-0.1
Year	24.6	1372	336	*	*	336	1036	0	0	*

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

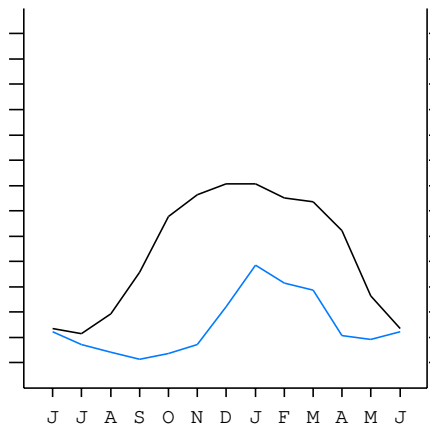
NULLAGINE (AUSTRALIA)

21°53'S 120°5'E 386 m 45/34 y.

T= 24.6 Ic= 16.4 TROPICAL XERIC (SEMIARID)
 m= 7.2 Tp= 2950 UPPER THERMOTROPICAL
 M= 23.3 Tn= 0 LOW SEMIARID
 M' = 47.2 Itc= 551
 m' = -2.8 Io= 1.1
 P= 336 mm ———
 PE= 1372 mm ———



All over the year,
 there is hydric deficit



NULLAGINE (AUSTRALIA)

Latitude: 21°53'S Longitude: 120°5'E Altitude: 386 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B2b]
 + Type: B. Oceanic
 + Subtype: 2. Euoceanic
 + Variant: b. Low
 Thermic types [A2.A1]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 2. Eutropical
 + Thermic type: A. Warm
 + Thermic subtype: 1. Torrid
 Bioclimatic types [A3.2a.4b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 3. XERIC
 + Bioclimatic variant ..:
 + Thermic type.....: 2. THERMOTROPICAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 4. SEMIARID
 + Ombrothermic subtype : b. LOW
 Bioclimatic Classification: Trxe.Ttr.Sar

NULLAGINE (AUSTRALIA)

Latitude: 21°53'S Longitude: 120°5'E Altitude: 386 m

PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 254
 Coldest semester of the year.....(Psw): 82
 Warmest four months period of the year.....(Pcm1): 193
 Following warmest four months period.....(Pcm2): 117
 Positive precipitation dryest 3 months.....(Ppd): 14
 Positive precipitation dryest 2 months.....(Ppd2): 6
 Positive precipitation dryest 1 month.....(Ppd1): 1
 Positive precipitation warmest 3 months.....(Pps): 180
 Positive precipitation warmest 2 months.....(Pps2): 119
 Positive precipitation warmest 1 month.....(Pps1): 76
 Positive precipitation coldest 3 months.....(Ppw): 43
 Positive precipitation coldest 2 months.....(Ppw2): 36
 Positive precipitation coldest 1 month.....(Ppw1): 13

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	43	18	180	94

Tropical rainfall rhythms: 1 > 2 > 3 > 4

NULLAGINE (AUSTRALIA)

Latitude: 21°53'S Longitude: 120°5'E Altitude: 386 m

TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 31.7
 Average coldest month [T].....(Tmin): 15.3
 Maximum temp. warmest month [M].....(Tmmax): 39.4
 Minimum temp. coldest month [m].....(Tmmin): 7.2
 Absolute Max.temp. warmest month [M'].....(Tamax): 47.2
 Absolute Min.temp. coldest month [m'].....(Tamin): -2.8
 First warmest contrasted month [M].....(Tcmax): 31.1 (9)
 First coldest contrasted month [m].....(Tcmin): 12.2 (9)
 Dry station temperature.....(Td): 653
 Positive temperature dryest 3 months.....(Tpd): 653
 Positive temperature dryest 2 months.....(Tpd2): 475
 Positive temperature dryest 1 month.....(Tpd1): 217
 Positive temperature warmest 3 months.....(Tps): 942
 Positive temperature warmest 2 months.....(Tps2): 631
 Positive temperature warmest 1 month.....(Tps1): 317
 Positive temperature coldest 3 months.....(Tpw): 494
 Positive temperature coldest 2 months.....(Tpw2): 317
 Positive temperature coldest 1 month.....(Tpw1): 153

NULLAGINE (AUSTRALIA)

Latitude: 21°53'S Longitude: 120°5'E Altitude: 386 m

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

NULLAGINE (AUSTRALIA)

Latitude: 21°53'S Longitude: 120°5'E Altitude: 386 m

OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 4.08
 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)	432	762	610	559	203	178	229	127	76	8	51	127
Tp	314	317	311	292	250	200	164	153	178	217	258	297
Io (Iom)	1.38	2.41	1.96	1.92	0.81	0.89	1.40	0.83	0.43	0.04	0.20	0.43
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	1804 / 942			940 / 742			432 / 494			186 / 772		
Io (Iot)	1.916			1.267			0.874			0.241		
Semesters	December-May						June-November					
Pp(x10)/Tp	2744 / 1683						618 / 1267					
Io (Iosm)	1.630						0.488					

NULLAGINE (AUSTRALIA)

Latitude: 21°53'S Longitude: 120°5'E Altitude: 386 m

Aridity Value Index (AVI)

[10xPP/TP=IO]: 3362/2950=1.14 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	432	762	610	559	203	178	229	127	76	8	51	127
Tp [T*10]	314	317	311	292	250	200	164	153	178	217	258	297
Iom [Pp/Tp]	138	241	196	192	81	89	140	83	43	4	20	43
Avm [200-Iom]	62	***	4	8	119	111	60	117	157	196	180	157
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	1804 / 942			940 / 742			432 / 494			186 / 772		
Iot [Pp/Tp]	192			127			87			24		
Avs E[Avm<200]	***			238			334			534		
Lower ultrahyperarid [1]						Upper ultrahyperarid [1]						
Lower hyperarid [1]						Strong lower arid [2]						
Weak upper arid [4]						Weak lower semiarid [3]						
Weak upper semiarid [2]												

NULLAGINE (AUSTRALIA)

Latitude: 21°53'S Longitude: 120°5'E Altitude: 386 m

BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp):	16.40
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]		54.40
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]		38.78
+ Oceanic (20<CI<40)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)]		1.98
+ Continental (1.7<CI<2.3)		
Rainfall Index of Lang (1925) [R=P/T]		13.68
+ Steppic (40>R>0)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)]		9.72
+ Arid -steppic- (15>Ia>5)		
I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)]		22.36
+ Arid (30>Q>0)		
I of Dantin & Revenga (1940) [DR=100*T/P]		7.31
+ Extremely arid (DR>6)		
Aridity Index of UNEP [I=P/PE]		0.25
+ Semiarid (0.5>Im>0.2)		
Potential Erosion I of Fournier (1960) [K=Pi ² /P]		17.27
+ Very low (K<60)		

NULLAGINE (AUSTRALIA)

Latitude: 21°53'S Longitude: 120°5'E Altitude: 386 m

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	0.24	0.19	0.18	0.06	0.06	0.09	0.05	0.03	0.00	0.01	0.03	0.13
T-E ratio	14.25	14.00	13.13	11.25	9.00	7.38	6.87	8.00	9.75	11.63	13.37	14.13
Precipitation-effectiveness: 10.61						Temperature-efficiency						132.75
Moisture Index [MI=100*(P-PE)/PE]												-75.49
+ E.Dry (-110<MI<-66.7)												
Index of dryness [DI=100*d/PE]												75.49
+ Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]												0.00
+ No surplus (0<HI<10)												
Potential Evapotranspiration PE												1371.94
+ Forth mesothermic (997<PE<1440)												

