

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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VILLA NOUGUES (ARGENTINA)

Altitude: 1388 m.

Latitude: 26° 53'S Longitude: 65° 23'W

Temperature observation period.: 1941-1950 (10)

Rainfall observation period....: 1941-1950 (10)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	19.10	24.20	16.30	33.40	7.80	253.0	99.58
Feb.	18.20	22.90	15.50	32.00	6.50	209.0	80.32
Mar.	16.10	20.50	13.70	29.30	5.00	223.0	69.34
Apr.	14.00	18.50	11.60	30.30	2.10	110.0	51.88
May.	11.30	16.00	8.90	29.90	-4.50	60.0	36.95
Jun.	9.20	14.10	6.40	31.30	-2.80	30.0	25.74
Jul.	8.90	14.40	5.60	32.50	-4.20	16.0	25.95
Aug.	10.80	16.60	7.00	34.53	-4.00	17.0	36.12
Sep.	12.70	18.50	9.50	33.00	-2.00	35.0	46.99
Oct.	14.80	20.80	11.80	32.90	1.80	108.0	64.96
Nov.	16.70	22.50	13.60	32.20	4.60	155.0	77.95
Dec.	19.10	24.30	15.90	34.70	7.40	148.0	100.42
Year	14.24	19.44	11.32	32.17	1.47	1364	716.20

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	342
Compensated thermicity index.....(Itc):	342
Simple continentality index.....(Ic):	10.2
Diurnality index.....(Id):	9.6
Annual ombrothermic index.....(Io):	7.98
Monthly dry ombrothermic index.....(Iod1):	1.80
Bimonthly dry ombrothermic index.....(Iod2):	1.68
Threemonthly dry ombrothermic index.....(Iod3):	2.18
Fourmonthly dry ombrothermic index.....(Iod4):	3.06
Annual ombro-evaporation index.....(Ioe):	1.90
Annual positive temperature.....(Tp):	1709
Annual negative temperature.....(Tn):	-0
Dry station temperature.....(Td):	289
Positive precipitation.....(Pp):	1364

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0°
Months	8	2	2	0	0

Latitudinal Belt...: Subtropical

Continentalty.....: Hyperoceanic - Low Subhyperoceanic

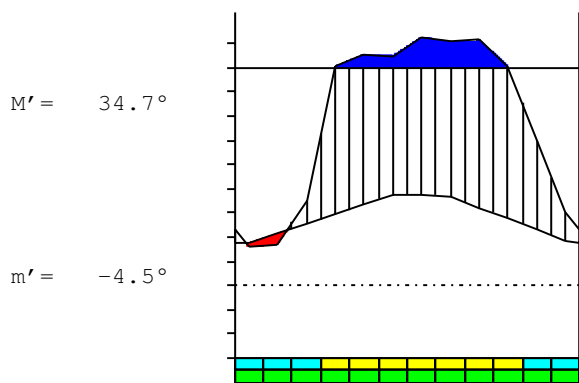
Bioclimate(Variant): TROPICAL PLUVISEASONAL (MESOPHYTIC)

Bioclimatic belt...: UPPER MESOTROPICAL LOW HUMID

VILLA NOUGUES (ARGENTINA)

1388 m

P= 1364 26° 53'S 65° 23'W 10/10 y.
 T= 14.2 ° Ic= 10.2 Tp= 1709 Tn= -0
 m= 5.6 ° M= 14.4 ° Itc= 342 Io= 8.0



TROPICAL PLUVISEASONAL (MESOPHYTIC)
UPPER MESOTROPICAL LOW HUMID

WATER INDEX CARD

VILLA NOUGUES (ARGENTINA)

Altitude: 1388 m. Latitude: 26° 53'S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	8.9	26	16	-10	90	26	0	0	16	-0.3
Aug.	10.8	36	17	-19	71	36	0	0	8	-0.5
Sep.	12.7	47	35	-12	59	47	0	0	4	-0.2
Oct.	14.8	65	108	41	100	65	0	2	3	0.6
Nov.	16.7	78	155	0	100	78	0	77	40	0.9
Dec.	19.1	100	148	0	100	100	0	48	44	0.4
Jan.	19.1	100	253	0	100	100	0	153	99	1.5
Feb.	18.2	80	209	0	100	80	0	129	114	1.6
Mar.	16.1	69	223	0	100	69	0	154	134	2.2
Apr.	14.0	52	110	0	100	52	0	58	96	1.1
May.	11.3	37	60	0	100	37	0	23	59	0.6
Jun.	9.2	26	30	0	100	26	0	4	32	0.1
Year	14.2	716	1364	*	*	716	0	648	648	*

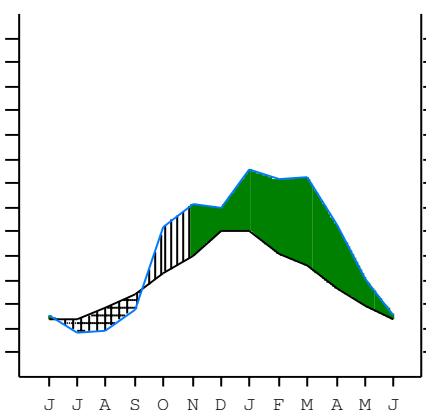
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coeficient DF = Deficit SP = Superavit

VILLA NOUGUES (ARGENTINA)

26°53'S 65°23'W 1388 m 10/10 y.

T= 14.2 Ic= 10.2 **TROPICAL PLUVISEASONAL (MESOPHYTIC)**
 m= 5.6 Tp= 1709 **UPPER MESOTROPICAL**
 M= 14.4 Tn= -0 **LOW HUMID**
 M' = 34.7 Itc= 342
 m' = -4.5 Io= 8.0
 P= 1364 mm ———
 PE= 716 mm ———

	Imbibing	7 Sep.
■	Saturation	29 Oct.
▨	Reserve Use	9 Jun.
□	Deficit	



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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [A3b]
 + Type: A. Hyperoceanic
 + Subtype: 3. Subhyperoceanic
 + Variant: b. Low

Thermic types [A3.B4]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 3. Subtropical
 + Thermic type: B. Temperate
 + Thermic subtype: 4. Temperate

Bioclimatic types [A4.3a.7b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 4. PLUVISEASONAL
 + Bioclimatic variant .:
 + Thermic type.....: 3. MESOTROPICAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 7. HUMID
 + Ombrothermic subtype : b. LOW

Bioclimatic Classification: Trde.Mtr.Hum

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 1096
 Coldest semester of the year.....(Psw): 268
 Warmest four months period of the year.....(Pcm1): 765
 Following warmest four months period.....(Pcm2): 423
 Positive precipitation dryest 3 months.....(Ppd): 63
 Positive precipitation dryest 2 months.....(Ppd2): 33
 Positive precipitation dryest 1 month.....(Ppd1): 16
 Positive precipitation warmest 3 months.....(Pps): 610
 Positive precipitation warmest 2 months.....(Pps2): 401
 Positive precipitation warmest 1 month.....(Pps1): 253
 Positive precipitation coldest 3 months.....(Ppw): 63
 Positive precipitation coldest 2 months.....(Ppw2): 46
 Positive precipitation coldest 1 month.....(Ppw1): 16

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	63	298	610	393

Seasonal rainfall rhythms: S > F > P > W

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 19.1
 Average coldest month [T].....(Tmin): 8.9
 Maximum temp. warmest month [M].....(Tmmax): 24.3
 Minimum temp. coldest month [m].....(Tmmin): 5.6
 Absolute Max.temp. warmest month [M'].....(Tamax): 34.7
 Absolute Min.temp. coldest month [m'].....(Tamin): -4.5
 First warmest contrasted month [M].....(Tcmax): 16.6 (8)
 First coldest contrasted month [m].....(Tcmin): 7.0 (8)
 Dry station temperature.....(Td): 289
 Positive temperature dryest 3 months.....(Tpd): 289
 Positive temperature dryest 2 months.....(Tpd2): 197
 Positive temperature dryest 1 month.....(Tpd1): 89
 Positive temperature warmest 3 months.....(Tps): 564
 Positive temperature warmest 2 months.....(Tps2): 382
 Positive temperature warmest 1 month.....(Tps1): 191
 Positive temperature coldest 3 months.....(Tpw): 289
 Positive temperature coldest 2 months.....(Tpw2): 181
 Positive temperature coldest 1 month.....(Tpw1): 89

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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): 0.53
 Mediterranean index of January.....(Im1): 0.39
 Mediterranean index of January & February....(Im2): 0.39
 Mediterranean index of December to February...(Im3): 0.46

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	1480	2530	2090	2230	1100	600	300	160	170	350	1080	1550
Tp	191	191	182	161	140	113	92	89	108	127	148	167
Io (Iom)	7.75	13.2	11.5	13.9	7.86	5.31	3.26	1.80	1.57	2.76	7.30	9.28
Seasons	Summer			Autumn			Winter			Spring		
Pp(x10)/Tp	6100 / 564			3930 / 414			630 / 289			2980 / 442		
Io (Iot)	10.82			9.493			2.180			6.742		
Semesters	December-May						June-November					
Pp(x10)/Tp	10030 / 978						3610 / 731					
Io (Iosm)	10.26						4.938					

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 10.20
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 17.95
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 14.89
 + Hyperoceanic (-20<CI<20)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 1.02
 + Oceanic (0.6<CI<1.1)
 Rainfall Index of Lang (1925) [R=P/T]: 95.78
 + Temperate warm (100>R>60)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 56.27
 + Humid (60>Ia>30)
 I of Emberger (1930) [Q=100*P/(Tmmax²-Tmmin²)]: 243.95
 + Humid (Q>90)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 1.04
 + Humid (2>DR>0)
 Aridity Index of UNEP [I=P/PE]: 1.90
 + Humid (I>0.65)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 46.93
 + Very low (K<60)

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)

- + Climate: A. Warm and temperate warm
- + Region: 3. Termoxerotic (Mediterranean warm)
- + Thermic type: 4. Mesothermic

Thorntthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	1.20	0.99	1.13	0.55	0.30	0.15	0.08	0.08	0.16	0.52	0.74	0.66
T-E ratio	8.60	8.19	7.25	6.30	5.09	4.14	4.00	4.86	5.71	6.66	7.52	8.60
Precipitation-effectiveness: 65.47						Temperature-efficiency: 76.91						
Moisture Index [MI=100*(P-PE)/PE]: 90.45 + B4.Humid highest-humid (80<MI<100)												
Index of dryness [DI=100*d/PE]: 0.00 + No deficit (0<DI<16.7)												
Index of humidity [HI=100*s/PE]: 90.45 + Strong surplus (20<HI)												
Potential Evapotranspiration PE: 716.20 + Second mesothermic (712<PE<855)												

