

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 14/02/2020)

CAMARONES (ARGENTINA)

Altitude: 34 m.

Latitude: 44°49'S Longitude: 65°42'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.	18.20	24.80	12.80	38.30	4.50	9.0	108.56
Feb.	18.30	25.00	12.60	38.00	3.20	13.0	90.97
Mar.	15.70	21.60	10.50	35.00	2.50	28.0	73.13
Apr.	13.30	18.80	8.20	31.00	-2.00	20.0	50.10
May.	10.10	14.50	5.30	27.00	-4.50	28.0	31.54
Jun.	7.80	11.70	3.10	23.00	-7.00	15.0	20.05
Jul.	7.40	11.30	3.10	21.00	-5.30	18.0	20.51
Aug.	7.50	22.20	2.80	23.00	-4.50	18.0	23.48
Sep.	10.10	15.30	5.00	25.00	-3.10	21.0	38.07
Oct.	12.80	19.40	7.10	32.40	-1.40	8.0	61.28
Nov.	14.80	21.20	9.50	36.30	1.10	14.0	78.48
Dec.	17.30	23.50	11.80	39.80	4.50	13.0	103.16
Year	12.78	19.11	7.65	30.82	-1.00	205	699.34

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	272
Compensated thermicity index.....(Itc):	272
Simple continentality index.....(Ic):	10.9
Diurnality index.....(Id):	19.4
Annual ombrothermic index.....(Io):	1.34
Monthly estival ombrothermic index.....(Ios1):	0.49
Bimonthly estival ombrothermic index.....(Ios2):	0.60
Threemonthly estival ombrothermic index.....(Ios3):	0.65
Fourmonthly estival ombrothermic index.....(Ios4):	0.71
Annual ombro-evaporation index.....(Ioe):	0.29
Annual positive temperature.....(Tp):	1533
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	538
Positive precipitation.....(Pp):	205

N. of Months	P>4T	P:2T-4T	PT-2T	P<T	T<0
	0	4	3	5	0

Latitudinal Belt...: High Eutemperate

Continentality.....: Hyperoceanic - Low Subhyperoceanic

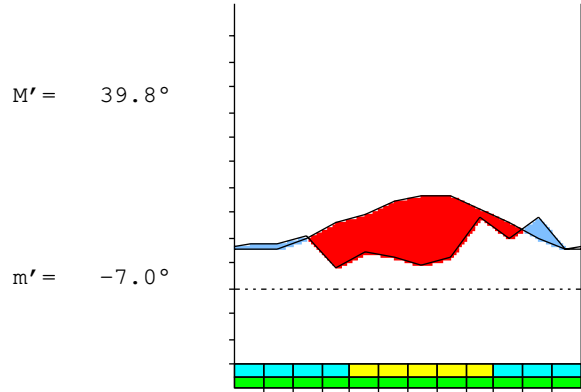
Bioclimate.....: MEDITERRANEAN XERIC-OCEANIC

Bioclimatic Belt...: UPPER MESOMEDITERRANEAN LOW SEMIARID

CAMARONES (ARGENTINA)

34 m

P= 205 44° 49'S 65° 42'W 10/10 y.
 T= 12.8 ° Ic= 10.9 Tp= 1533 Tn= 0
 m= 3.1 ° M= 11.3 ° Itc= 272 Io= 1.3



MEDITERRANEAN XERIC-OCEANIC
 UPPER MESOMEDITERRANEAN LOW SEMIARID

WATER INDEX CARD CAMARONES (ARGENTINA)
 Altitude: 34 m. Latitude: 44° 49'S

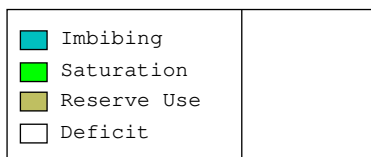
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	7.4	21	18	0	0	18	3	0	0	-0.1
Aug.	7.5	23	18	0	0	18	5	0	0	-0.2
Sep.	10.1	38	21	0	0	21	17	0	0	-0.4
Oct.	12.8	61	8	0	0	8	53	0	0	-0.8
Nov.	14.8	78	14	0	0	14	64	0	0	-0.8
Dec.	17.3	103	13	0	0	13	90	0	0	-0.8
Jan.	18.2	109	9	0	0	9	100	0	0	-0.9
Feb.	18.3	91	13	0	0	13	78	0	0	-0.8
Mar.	15.7	73	28	0	0	28	45	0	0	-0.6
Apr.	13.3	50	20	0	0	20	30	0	0	-0.6
May.	10.1	32	28	0	0	28	4	0	0	-0.1
Jun.	7.8	20	15	0	0	15	5	0	0	-0.2
Year	12.8	699	205	*	*	205	494	0	0	*

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

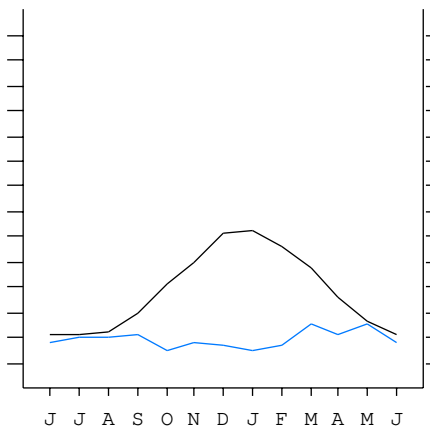
CAMARONES (ARGENTINA)

44°49'S 65°42'W 34 m 10/10 y.

T= 12.8 Ic= 10.9 MEDITERRANEAN XERIC-OCEANIC
 m= 3.1 Tp= 1533 UPPER MESOMEDITERRANEAN
 M= 11.3 Tn= 0 LOW SEMIARID
 M' = 39.8 Itc= 272
 m' = -7.0 Io= 1.3
 P= 205 mm
 PE= 699 mm



All over the year,
 there is hydic deficit



CAMARONES (ARGENTINA)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [A3b]
 + Type: A. Hyperoceanic
 + Subtype: 3. Subhyperoceanic
 + Variant: b. Low
 Thermic types [B1.B4]
 + Latitudinal zone: B. Temperate
 + Latitudinal belt: 1. High Eutemperate
 + Thermic type: B. Temperate
 + Thermic subtype: 4. Temperate
 Bioclimatic types [B6.3a.4b]
 + Macrobioclimate: B. MEDITERRANEAN
 + Bioclimate: 6. XERIC-OCEANIC
 + Bioclimatic variant .:
 + Thermic type.....: 3. MESOMEDITERRANEAN
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 4. SEMIARID
 + Ombrothermic subtype : b. LOW
 Bioclimatic ClassificationMexo.Mme.Sar.Sho

CAMARONES (ARGENTINA)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 97
 Coldest semester of the year.....(Psw): 108
 Warmest four months period of the year.....(Pcm1): 63
 Following warmest four months period.....(Pcm2): 81
 Positive precipitation dryest 3 months.....(Ppd): 35
 Positive precipitation dryest 2 months.....(Ppd2): 22
 Positive precipitation dryest 1 month.....(Ppd1): 8
 Positive precipitation warmest 3 months.....(Pps): 35
 Positive precipitation warmest 2 months.....(Pps2): 22
 Positive precipitation warmest 1 month.....(Pps1): 13
 Positive precipitation coldest 3 months.....(Ppw): 51
 Positive precipitation coldest 2 months.....(Ppw2): 36
 Positive precipitation coldest 1 month.....(Ppw1): 18

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	51	43	35	76

Seasonal rainfall rhythms: F > W > P > S

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 18.3
 Average coldest month [T].....(Tmin): 7.4
 Maximum temp. warmest month [M].....(Tmax): 25.0
 Minimum temp. coldest month [m].....(Tmin): 2.8
 Absolute Max.temp. warmest month [M'].....(Tamax): 39.8
 Absolute Min.temp. coldest month [m'].....(Tamin): -7.0
 First warmest contrasted month [M].....(Tcmax): 22.2 (8)
 First coldest contrasted month [m].....(Tcmin): 2.8 (8)
 Estival temperature.....(Ts): 538
 Positive temperature dryest 3 months.....(Tpd): 449
 Positive temperature dryest 2 months.....(Tpd2): 365
 Positive temperature dryest 1 month.....(Tpd1): 128
 Positive temperature warmest 3 months.....(Tps): 538
 Positive temperature warmest 2 months.....(Tps2): 365
 Positive temperature warmest 1 month.....(Tps1): 183
 Positive temperature coldest 3 months.....(Tpw): 227
 Positive temperature coldest 2 months.....(Tpw2): 149
 Positive temperature coldest 1 month.....(Tpw1): 74

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

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 3.41
 Mediterranean index of January.....(Im1): 12.06
 Mediterranean index of January & February....(Im2): 9.07
 Mediterranean index of December to February...(Im3): 8.65

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	130	90	130	280	200	280	150	180	180	210	80	140
Tp	173	182	183	157	133	101	78	74	75	101	128	148
Io (Iom)	0.75	0.49	0.71	1.78	1.50	2.77	1.92	2.43	2.40	2.08	0.63	0.95
Seasons	Summer			Autumn			Winter			Spring		
Pp(x10)/Tp	350 / 538			760 / 391			510 / 227			430 / 377		
Io (Iot)	0.651			1.944			2.247			1.141		
Semesters	December-May						June-November					
Pp(x10)/Tp	1110 / 929						940 / 604					
Io (Iosm)	1.195						1.556					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 2050/1533=1.34 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	130	90	130	280	200	280	150	180	180	210	80	140
Tp [T*10]	173	182	183	157	133	101	78	74	75	101	128	148
Iom [Pp/Tp]	75	49	71	178	150	277	192	243	240	208	63	95
Avm [200-Iom]	125	151	129	22	50	***	8	***	***	***	138	105
Seasons	Summer			Autumn			Winter			Spring		
Pp / Tp	350 / 538			760 / 391			510 / 227			430 / 377		
Iot [Pp/Tp]	65			194			225			114		
Avs E[Avm<200]	404			***			***			***		
Strong lower arid [1]						Weak lower arid [2]						
Strong upper arid [2]						Weak upper arid [1]						
Strong upper semiarid [1]						Weak upper semiarid [2]						

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp): 10.90
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]	5.89
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]	8.67
+ Hyperoceanic (-20<CI<20)	
CI of Currey (1974) [CI=Sp/(1+Lat/3)]	0.68
+ Oceanic (0.6<CI<1.1)	
Rainfall Index of Lang (1925) [R=P/T]	16.05
+ Steppic (40>R>0)	
Aridity Index of Martonne (1926) [Ia=P/(T+10)]	9.00
+ Arid -steppic- (15>Ia>5)	
I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)]	33.22
+ Semiarid (50>Q>30)	
I of Dantin & Revenga (1940) [DR=100*T/P]	6.23
+ Extremely arid (DR>6)	
Aridity Index of UNEP [I=P/PE]	0.29
+ Semiarid (0.5>Im>0.2)	
Potencial Erosion I of Fournier (1960) [K=Pi ² /P].....	3.82
+ Very low (K<60)	

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate: A. Warm and temperate warm
 + Region: 5. Bixeric (Bixeric)
 + Thermic type: 4. Mesothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.03	0.05	0.11	0.08	0.14	0.07	0.09	0.09	0.10	0.03	0.05	0.05
T-E ratio	8.19	8.23	7.06	5.99	4.55	3.51	3.33	3.38	4.55	5.76	6.66	7.78
Precipitation-effectiveness: 8.92						Temperature-efficiency: 68.99						
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												
+ First mesothermic (570<PE<712)												

