

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

CASTROVERDE DE CAMPOS (ESP ZAMORA) Altitude: 707 m.

Latitude: 41°58'N Longitude: 5°19'W
 Temperature observation period.: 1936-1970 (35)
 Rainfall observation period....: 1936-1970 (35)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	4.60	8.40	0.70	13.70	-5.10	49.0	11.43
Feb.	5.60	9.90	1.30	15.30	-5.10	64.0	14.75
Mar.	7.70	12.90	2.50	19.30	-3.50	38.0	28.01
Apr.	10.30	16.10	4.60	23.10	-0.70	32.0	44.43
May.	14.30	20.80	7.90	29.20	1.70	41.0	76.52
Jun.	18.10	25.10	11.10	33.40	5.90	31.0	104.72
Jul.	21.90	29.90	13.90	35.20	9.30	11.0	135.17
Aug.	21.00	28.40	13.60	35.20	7.90	6.0	119.00
Sep.	17.80	24.30	11.20	31.70	6.40	32.0	83.92
Oct.	13.80	19.70	7.90	25.50	1.10	33.0	55.09
Nov.	7.50	11.90	3.10	18.20	-2.20	50.0	21.55
Dec.	4.30	8.20	0.50	13.50	-5.30	28.0	10.09
Year	12.24	17.97	6.52	24.44	0.87	415	704.66

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	209
Compensated thermicity index.....(Itc):	209
Simple continentality index.....(Ic):	17.6
Diurnality index.....(Id):	16.0
Annual ombrothermic index.....(Io):	2.83
Monthly estival ombrothermic index.....(Ios1):	0.29
Bimonthly estival ombrothermic index.....(Ios2):	0.40
Threemonthly estival ombrothermic index.....(Ios3):	0.79
Fourmonthly estival ombrothermic index.....(Ios4):	1.18
Annual ombro-evaporation index.....(Ioe):	0.59
Annual positive temperature.....(Tp):	1469
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	610
Positive precipitation.....(Pp):	415

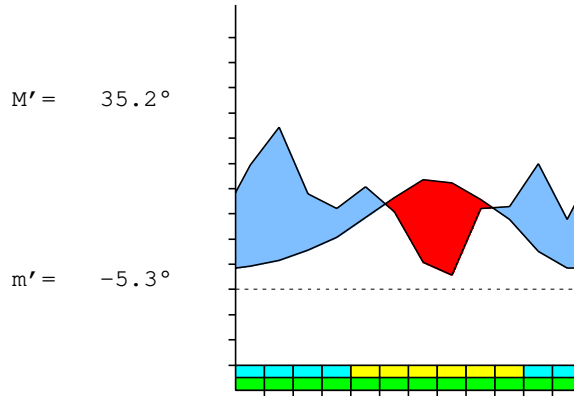
N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	5	3	2	2	0

Latitudinal Belt...: Low eutemperate
 Continentality.....: Oceanic - Low Semicontinental
 Bioclimate.....: MEDITERRANEAN PLUVISEASONAL-OCEANIC
 Bioclimatic Belt...: LOW SUPRAMEDITERRANEAN UPPER DRY

CASTROVERDE DE CAMPOS (ESP ZAMORA)

707 m

P= 415 41° 58'N 5° 19'W 35/35 y.
 T= 12.2° Ic= 17.6 Tp= 1469 Tn= 0
 m= 0.5° M= 8.2° Itc= 209 Io= 2.8



MEDITERRANEAN PLUVISEASONAL-OCEANIC
 LOW SUPRAMEDITERRANEAN UPPER DRY

WATER INDEX CARD

CASTROVERDE DE CAMPOS (ESP ZAMORA)

Altitude: 707 m.

Latitude: 41° 58'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	4.6	11	49	38	84	11	0	0	0	3.2
Feb.	5.6	15	64	16	100	15	0	33	17	3.3
Mar.	7.7	28	38	0	100	28	0	10	13	0.3
Apr.	10.3	44	32	-12	88	44	0	0	7	-0.2
May.	14.3	77	41	-36	52	77	0	0	3	-0.4
Jun.	18.1	105	31	-52	0	83	22	0	2	-0.7
Jul.	21.9	135	11	0	0	11	124	0	1	-0.9
Aug.	21.0	119	6	0	0	6	113	0	0	-0.9
Sep.	17.8	84	32	0	0	32	52	0	0	-0.6
Oct.	13.8	55	33	0	0	33	22	0	0	-0.4
Nov.	7.5	22	50	28	28	22	0	0	0	1.3
Dec.	4.3	10	28	18	46	10	0	0	0	1.7
Year	12.2	705	415	*	*	372	333	43	43	*

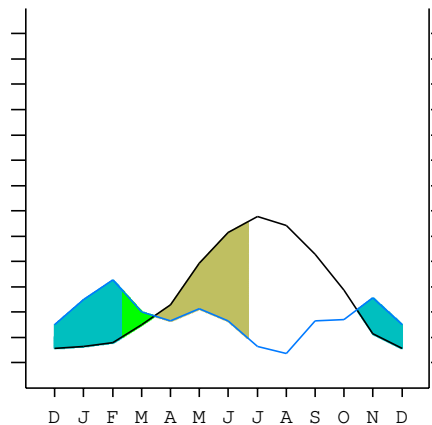
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coeficient DF = Deficit SP = Superavit

CASTROVERDE DE CAMPOS (ESP ZAMORA)

41°58'N 5°19'W 707 m 35/35 y.

T= 12.2 Ic= 17.6 MEDITERRANEAN PLUVISEASONAL-OCEANIC
 m= 0.5 Tp= 1469 LOW SUPRAMEDITERRANEAN
 M= 8.2 Tn= 0 UPPER DRY
 M' = 35.2 Itc= 209
 m' = -5.3 Io= 2.8
 P= 415 mm ———
 PE= 705 mm ———

Imbibing	14 Oct.
Saturation	10 Feb.
Reserve Use	14 Mar.
Deficit	22 Jun.



CASTROVERDE DE CAMPOS (ESP ZAMORA)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B1a]
 + Type: B. Oceanic
 + Subtype: 1. Semicontinental
 + Variant: a. Low
 Thermic types [B1.B4]
 + Latitudinal zone: B. Temperate
 + Latitudinal belt: 1. Low eutemperate
 + Thermic type: B. Temperate
 + Thermic subtype: 4. Temperate
 Bioclimatic types [B8.4b.5a]
 + Macrobioclimate: B. MEDITERRANEAN
 + Bioclimate: 8. PLUVISEASONAL-OCEANIC
 + Bioclimatic variant ..:
 + Thermic type.....: 4. SUPRAMEDITERRANEAN
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 5. DRY
 + Ombrothermic subtype : a. UPPER
 Bioclimatic Classification: Mehc.Sme.Dry

CASTROVERDE DE CAMPOS (ESP ZAMORA)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 154
 Coldest semester of the year.....(Psw): 261
 Warmest four months period of the year.....(Pcm1): 80
 Following warmest four months period.....(Pcm2): 160
 Positive precipitation dryest 3 months.....(Ppd): 48
 Positive precipitation dryest 2 months.....(Ppd2): 17
 Positive precipitation dryest 1 month.....(Ppd1): 6
 Positive precipitation warmest 3 months.....(Pps): 48
 Positive precipitation warmest 2 months.....(Pps2): 17
 Positive precipitation warmest 1 month.....(Pps1): 11
 Positive precipitation coldest 3 months.....(Ppw): 141
 Positive precipitation coldest 2 months.....(Ppw2): 77
 Positive precipitation coldest 1 month.....(Ppw1): 28

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	141	111	48	115

Seasonal rainfall rhythms: W > F > P > S

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 21.9
 Average coldest month [T].....(Tmin): 4.3
 Maximum temp. warmest month [M].....(Tmmax): 29.9
 Minimum temp. coldest month [m].....(Tmmin): 0.5
 Absolute Max.temp. warmest month [M'].....(Tamax): 35.2
 Absolute Min.temp. coldest month [m'].....(Tamin): -5.3
 First warmest contrasted month [M].....(Tcmax): 29.9 (7)
 First coldest contrasted month [m].....(Tcmin): 13.9 (7)
 Estival temperature.....(Ts): 610
 Positive temperature dryest 3 months.....(Tpd): 610
 Positive temperature dryest 2 months.....(Tpd2): 429
 Positive temperature dryest 1 month.....(Tpd1): 210
 Positive temperature warmest 3 months.....(Tps): 610
 Positive temperature warmest 2 months.....(Tps2): 429
 Positive temperature warmest 1 month.....(Tps1): 219
 Positive temperature coldest 3 months.....(Tpw): 145
 Positive temperature coldest 2 months.....(Tpw2): 89
 Positive temperature coldest 1 month.....(Tpw1): 43

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

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 1.70
 Mediterranean index of July.[PE/P].....(Im1): 12.29
 Mediterranean index of July & August.....(Im2): 14.95
 Mediterranean index of June, July & August....(Im3): 7.48

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	280	490	640	380	320	410	310	110	60	320	330	500
Tp	43	46	56	77	103	143	181	219	210	178	138	75
Io (Iom)	6.51	10.7	11.4	4.94	3.11	2.87	1.71	0.50	0.29	1.80	2.39	6.67
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	1410 / 145			1110 / 323			480 / 610			1150 / 391		
Io (Iot)	9.724			3.437			0.787			2.941		
Semesters	December-May						June-November					
Pp(x10)/Tp	2520 / 468						1630 / 1001					
Io (Iosm)	5.385						1.628					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 4150/1469=2.83 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	280	490	640	380	320	410	310	110	60	320	330	500
Tp [T*10]	43	46	56	77	103	143	181	219	210	178	138	75
Iom [Pp/Tp]	651	\$\$	\$\$	494	311	287	171	50	29	180	239	667
Avm [200-Iom]	***	***	***	***	***	***	29	150	171	20	***	***
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	1410 / 145			1110 / 323			480 / 610			1150 / 391		
Iot [Pp/Tp]	972			344			79			294		
Avs E[Avm<200]	***			***			350			***		
Lower hyperarid [1]						Weak lower arid [1]						
Weak upper arid [1]						Weak upper semiarid [2]						

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp):	17.60
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]		24.34
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]		23.99
+ Oceanic (20<CI<40)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)]		1.17
+ Subcontinental (1.1<CI<1.7)		
Rainfall Index of Lang (1925) [R=P/T]		33.90
+ Steppic (40>R>0)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)]		18.66
+ Semiarid -mediterranean- (20>Ia>15)		
I of Emberger (1930) [Q=100*P/(Tmmax ² -Tmmin ²)]		46.43
+ Semiarid (50>Q>30)		
I of Dantin & Revenga (1940) [DR=100*T/P]		2.95
+ Semiarid (3>DR>2)		
Aridity Index of UNEP [I=P/PE]		0.59
+ Subhumid - dry (0.65>I>0.5)		
Potential Erosion I of Fournier (1960) [K=Pi ² /P]		9.87
+ Very low (K<60)		

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate

- + Climate
- + Region
- + Thermic type: 4. Mesothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.31	0.40	0.21	0.16	0.18	0.12	0.03	0.02	0.12	0.14	0.28	0.17
T-E ratio	2.07	2.52	3.46	4.64	6.44	8.15	9.85	9.45	8.01	6.21	3.38	1.94
Precipitation-effectiveness: 21.35						Temperature-efficiency						66.10
Moisture Index [MI=100*(P-PE)/PE]												-41.11
+ D.Semiarid (-66.7<MI<-33.3)												
Index of dryness [DI=100*d/PE]												47.23
+ Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]												6.12
+ No surplus (0<HI<10)												
Potential Evapotranspiration PE												704.66
+ First mesothermic (570<PE<712)												

