

# Phytosociological Research Center

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## Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

SORRIBES (ESP LERIDA)

Altitude: 955 m.

Latitude: 42°14'N Longitude: 1°29'E

Temperature observation period.: 1932-1935 (4)

Rainfall observation period....: 1932-1935 (4)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	1.30	7.20	-4.60	13.80	-10.00	21.0	3.20
Feb.	3.00	9.80	-3.70	18.10	-10.50	27.0	8.56
Mar.	5.20	11.40	-1.00	19.10	-5.20	46.0	20.53
Apr.	8.80	15.30	2.30	23.00	-4.20	74.0	41.44
May.	12.50	19.20	5.80	26.10	0.50	83.0	70.45
Jun.	16.20	23.20	9.30	29.50	4.50	68.0	96.33
Jul.	20.30	27.80	12.80	33.60	7.90	62.0	126.60
Aug.	19.80	27.70	11.80	32.80	7.10	74.0	114.29
Sep.	17.80	25.40	10.20	30.30	5.30	75.0	88.13
Oct.	12.60	20.90	4.40	25.50	-0.80	49.0	53.62
Nov.	6.20	12.10	0.40	16.10	-5.20	62.0	20.10
Dec.	3.40	8.60	-1.70	14.50	-8.30	77.0	9.55
Year	10.59	17.38	3.83	23.53	-1.58	718	652.78

### BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	132
Compensated thermicity index.....(Itc):	137
Simple continentality index.....(Ic):	19.0
Diurnality index.....(Id):	16.5
Annual ombrothermic index.....(Io):	5.65
Monthly estival ombrothermic index.....(Ios1):	3.05
Bimonthly estival ombrothermic index.....(Ios2):	3.39
Three monthly estival ombrothermic index.....(Ios3):	3.62
Four monthly estival ombrothermic index.....(Ios4):	4.17
Annual ombro-evaporation index.....(Ioe):	1.34
Annual positive temperature.....(Tp):	1271
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	563
Positive precipitation.....(Pp):	718

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	9	3	0	0	0

Latitudinal Belt...: Low eutemperate

Continentality.....: Oceanic - Low Semicontinental

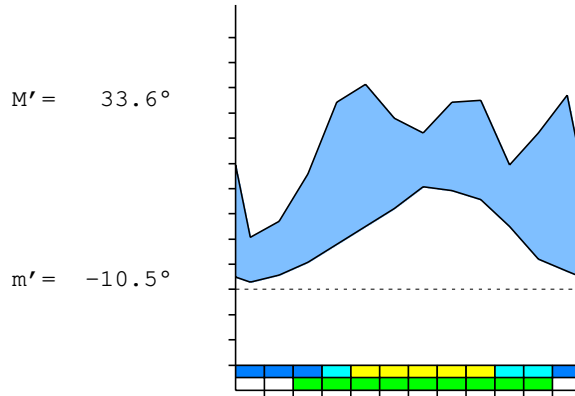
Bioclimate.....: TEMPERATE OCEANIC

Bioclimatic Belt...: LOW SUPRATEMPERATE UPPER SUBHUMID

SORRIBES (ESP LERIDA)

955 m

P= 718      42° 14'N      1° 29'E      4/4 y.  
 T= 10.6°    Ic= 19.0      Tp= 1271      Tn= 0  
 m= -4.6°    M= 7.2°      Itc= 137      Io= 5.6



TEMPERATE OCEANIC  
 LOW SUPRATEMPERATE UPPER SUBHUMID

WATER INDEX CARD      SORRIBES (ESP LERIDA)  
 Altitude: 955 m.      Latitude: 42° 14'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	1.3	3	21	0	100	3	0	18	11	5.5
Feb.	3.0	9	27	0	100	9	0	18	15	2.1
Mar.	5.2	21	46	0	100	21	0	25	20	1.2
Apr.	8.8	41	74	0	100	41	0	33	26	0.7
May.	12.5	70	83	0	100	70	0	13	19	0.1
Jun.	16.2	96	68	-28	72	96	0	0	10	-0.2
Jul.	20.3	127	62	-65	7	127	0	0	5	-0.5
Aug.	19.8	114	74	-7	0	81	33	0	2	-0.3
Sep.	17.8	88	75	0	0	75	13	0	1	-0.1
Oct.	12.6	54	49	0	0	49	5	0	1	0.0
Nov.	6.2	20	62	42	42	20	0	0	0	2.0
Dec.	3.4	10	77	58	100	10	0	9	5	7.0
Year	10.6	653	718	*	*	602	51	116	116	*

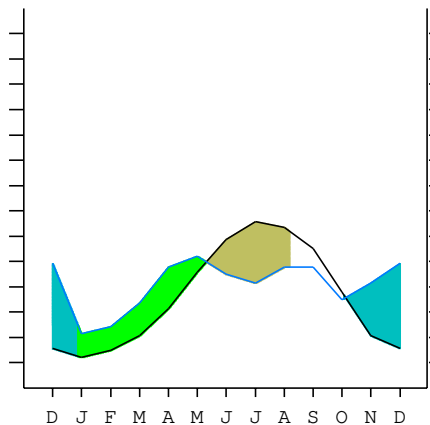
R = Reserve    VR = Variation of the reserve    RE = Real evapotranspiration  
 DR = Drainage    HC = Humidity coefficient    DF = Deficit    SP = Superavit

SORRIBES (ESP LERIDA)

42°14'N    1°29'E    955 m    4/4 y.

T= 10.6    Ic= 19.0    TEMPERATE OCEANIC  
 m= -4.6    Tp= 1271    LOW SUPRATEMPERATE  
 M= 7.2    Tn= 0    UPPER SUBHUMID  
 M' = 33.6    Itc= 137  
 m' = -10.5    Io= 5.6  
 P= 718    mm    ———  
 PE= 653    mm    ———

Imbibing	3 Oct.
Saturation	26 Dec.
Reserve Use	10 May.
Deficit	6 Aug.



SORRIBES (ESP LERIDA)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B1a]  
 + Type .....: B. Oceanic  
 + Subtype .....: 1. Semicontinental  
 + Variant .....: a. Low

Thermic types [B1.B5]  
 + Latitudinal zone .....: B. Temperate  
 + Latitudinal belt .....: 1. Low eutemperate  
 + Thermic type .....: B. Temperate  
 + Thermic subtype .....: 5. Subtemperate

Bioclimatic types [C3.4b.6a]  
 + Macrobioclimate .....: C. TEMPERATE  
 + Bioclimate .....: 3. OCEANIC  
 + Bioclimatic variant ..:  
 + Thermic type.....: 4. SUPRATEMPERATE  
 + Thermic subtype.....: b. LOW  
 + Ombrothermic type ...: 6. SUBHUMID  
 + Ombrothermic subtype : a. UPPER

Bioclimatic Classification .....: Teco.Ste.Shu

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 411  
 Coldest semester of the year.....(Psw): 307  
 Warmest four months period of the year.....(Pcm1): 279  
 Following warmest four months period.....(Pcm2): 209  
 Positive precipitation dryest 3 months.....(Ppd): 94  
 Positive precipitation dryest 2 months.....(Ppd2): 48  
 Positive precipitation dryest 1 month.....(Ppd1): 21  
 Positive precipitation warmest 3 months.....(Pps): 211  
 Positive precipitation warmest 2 months.....(Pps2): 136  
 Positive precipitation warmest 1 month.....(Pps1): 62  
 Positive precipitation coldest 3 months.....(Ppw): 125  
 Positive precipitation coldest 2 months.....(Ppw2): 48  
 Positive precipitation coldest 1 month.....(Ppw1): 21

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	125	203	204	186

Seasonal rainfall rhythms: S > P > F > W

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 20.3  
 Average coldest month [T].....(Tmin): 1.3  
 Maximum temp. warmest month [M].....(Tmmax): 27.8  
 Minimum temp. coldest month [m].....(Tmmin): -4.6  
 Absolute Max.temp. warmest month [M'].....(Tamax): 33.6  
 Absolute Min.temp. coldest month [m'].....(Tamin): -10.5  
 First warmest contrasted month [M].....(Tcmax): 20.9 (10)  
 First coldest contrasted month [m].....(Tcmin): 4.4 (10)  
 Estival temperature.....(Ts): 563  
 Positive temperature dryest 3 months.....(Tpd): 95  
 Positive temperature dryest 2 months.....(Tpd2): 43  
 Positive temperature dryest 1 month.....(Tpd1): 13  
 Positive temperature warmest 3 months.....(Tps): 579  
 Positive temperature warmest 2 months.....(Tps2): 401  
 Positive temperature warmest 1 month.....(Tps1): 203  
 Positive temperature coldest 3 months.....(Tpw): 77  
 Positive temperature coldest 2 months.....(Tpw2): 43  
 Positive temperature coldest 1 month.....(Tpw1): 13

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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	
Ultragelid...[M' <=0] (Pf)												
Hypergelid...[M <=0] (Pf)												
Gelid.....[T <=0] (Pf)												
Subgelid.....[m <=0] (Pf)	o	o	o									o
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): 0.91  
 Mediterranean index of July.[PE/P].....(Im1): 2.04  
 Mediterranean index of July & August.....(Im2): 1.77  
 Mediterranean index of June, July & August....(Im3): 1.65

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	770	210	270	460	740	830	680	620	740	750	490	620
Tp	34	13	30	52	88	125	162	203	198	178	126	62
Io (Iom)	22.6	16.2	9.00	8.85	8.41	6.64	4.20	3.05	3.74	4.21	3.89	10.0
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	1250 / 77			2030 / 265			2040 / 563			1860 / 366		
Io (Iot)	16.23			7.660			3.623			5.082		
Semesters	December-May						June-November					
Pp(x10)/Tp	3280 / 342						3900 / 929					
Io (Iosm)	9.591						4.198					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 7180/1271=5.65 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	770	210	270	460	740	830	680	620	740	750	490	620
Tp [T*10]	34	13	30	52	88	125	162	203	198	178	126	62
Iom [Pp/Tp]	\$\$	\$\$	900	885	841	664	420	305	374	421	389	\$\$
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	***	***
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	1250 / 77			2030 / 265			2040 / 563			1860 / 366		
Iot [Pp/Tp]	1623			766			362			508		
Avs E[Avm<200]	***			***			***			***		

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....	(Sp): 19.00
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4] .....	27.65
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14] .....	26.86
+ Oceanic (20<CI<40)	
CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....	1.26
+ Subcontinental (1.1<CI<1.7)	
Rainfall Index of Lang (1925) [R=P/T] .....	67.79
+ Temperate warm (100>R>60)	
Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....	34.87
+ Humid (60>Ia>30)	
I of Emberger (1930) [Q=100*P/(Tmax <sup>2</sup> -Tmin <sup>2</sup> )] .....	95.52
+ Humid (Q>90)	
I of Dantin & Revenga (1940) [DR=100*T/P] .....	1.48
+ Humid (2>DR>0)	
Aridity Index of UNEP [I=P/PE] .....	1.10
+ Humid (I>0.65)	
Potential Erosion I of Fournier (1960) [K=Pi <sup>2</sup> /P] .....	9.59
+ Very low (K<60)	

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)  
 + Climate .....

- + Climate .....
- + Region .....
- + Thermic type: 5. Meso-microthermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.14	0.17	0.28	0.42	0.42	0.30	0.24	0.30	0.32	0.23	0.37	0.53
T-E ratio	0.58	1.35	2.34	3.96	5.63	7.29	9.13	8.91	8.01	5.67	2.79	1.53
Precipitation-effectiveness: 37.24						Temperature-efficiency .....						57.19
Moisture Index [MI=100*(P-PE)/PE] .....												9.99
+ C2.Subhumid humid (0<MI<20)												
Index of dryness [DI=100*d/PE] .....												7.80
+ No deficit (0<DI<16.7)												
Index of humidity [HI=100*s/PE] .....												17.79
+ Moderate surplus (10<HI<20)												
Potential Evapotranspiration PE .....												652.78
+ First mesothermic (570<PE<712)												

