

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

SALAS (ESP OVIEDO)

Altitude: 239 m.

Latitude: 43°24'N Longitude: 6°15'W

Temperature observation period.: 1957-1966 (10)

Rainfall observation period....: 1957-1966 (10)

| (C/mm) | Ti | Mi | mi | M'i | m'i | Pi | Epi |
|--------|-------|-------|-------|-------|-------|-------|--------|
| Jan. | 8.20 | 12.00 | 4.50 | 19.70 | -1.40 | 161.0 | 21.69 |
| Feb. | 8.90 | 13.30 | 4.40 | 22.10 | -2.00 | 126.0 | 24.59 |
| Mar. | 11.20 | 16.00 | 6.50 | 23.40 | 0.60 | 118.0 | 42.00 |
| Apr. | 12.20 | 17.10 | 7.30 | 24.20 | 2.00 | 98.0 | 51.89 |
| May. | 15.20 | 20.20 | 10.30 | 29.20 | 4.60 | 93.0 | 79.06 |
| Jun. | 16.90 | 21.70 | 12.10 | 30.50 | 6.00 | 72.0 | 92.97 |
| Jul. | 19.20 | 23.80 | 14.60 | 30.60 | 9.60 | 30.0 | 111.74 |
| Aug. | 19.60 | 24.40 | 14.80 | 31.20 | 10.20 | 54.0 | 106.94 |
| Sep. | 18.50 | 23.40 | 13.60 | 29.80 | 8.10 | 69.0 | 85.58 |
| Oct. | 14.60 | 19.10 | 10.10 | 25.60 | 4.70 | 125.0 | 56.39 |
| Nov. | 10.30 | 14.30 | 6.30 | 20.40 | 0.20 | 143.0 | 29.71 |
| Dec. | 8.20 | 11.90 | 4.50 | 18.30 | -1.10 | 176.0 | 20.62 |
| Year | 13.58 | 18.10 | 9.08 | 25.42 | 3.46 | 1265 | 723.18 |

BIOCLIMATIC INDICES AND DIAGNOSIS

| | |
|-----------------------------------------------------|------|
| Thermicity index.....(It): | 301 |
| Compensated thermicity index.....(Itc): | 301 |
| Simple continentality index.....(Ic): | 11.4 |
| Diurnality index.....(Id): | 9.9 |
| Annual ombrothermic index.....(Io): | 7.76 |
| Monthly estival ombrothermic index.....(Ios1): | 1.56 |
| Bimonthly estival ombrothermic index.....(Ios2): | 2.16 |
| Threemonthly estival ombrothermic index.....(Ios3): | 2.80 |
| Fourmonthly estival ombrothermic index.....(Ios4): | 3.51 |
| Annual ombro-evaporation index.....(Ioe): | 0.54 |
| Annual positive temperature.....(Tp): | 1630 |
| Annual negative temperature.....(Tn): | 0 |
| Estival temperature.....(Ts): | 557 |
| Positive precipitation.....(Pp): | 1265 |

| N. of | P>4T | P:2T-4T | PT-2T | P<T | T<0 |
|--------|------|---------|-------|-----|-----|
| Months | 9 | 2 | 1 | 0 | 0 |

Latitudinal Belt...: High eutemperate

Continentalty.....: Oceanic - High Semihyperoceanic

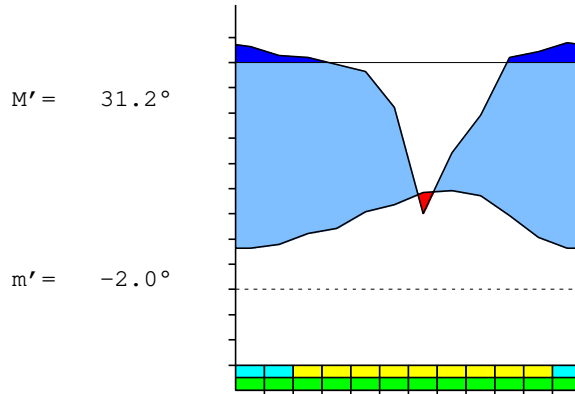
Bioclimate(Variant): TEMPERATE OCEANIC (SUBMEDITERRANEAN)

Bioclimatic Belt...: UPPER THERMOTEMPERATE LOW HUMID

SALAS (ESP OVIEDO)

239 m

P= 1265 43° 24'N 6° 15'W 10/10 y.
 T= 13.6° Ic= 11.4 Tp= 1630 Tn= 0
 m= 4.5° M= 12.0° Itc= 301 Io= 7.8



TEMPERATE OCEANIC (SUBMEDITERRANEAN)
 UPPER THERMOTEMPERATE LOW HUMID

WATER INDEX CARD

SALAS (ESP OVIEDO)

Altitude: 239 m.

Latitude: 43° 24'N

| (C/mm) | T | PE | P | VR | R | RE | DF | SP | DR | HC |
|--------|------|-----|------|-----|-----|-----|----|-----|-----|------|
| Jan. | 8.2 | 22 | 161 | 0 | 100 | 22 | 0 | 139 | 119 | 6.4 |
| Feb. | 8.9 | 25 | 126 | 0 | 100 | 25 | 0 | 101 | 110 | 4.1 |
| Mar. | 11.2 | 42 | 118 | 0 | 100 | 42 | 0 | 76 | 93 | 1.8 |
| Apr. | 12.2 | 52 | 98 | 0 | 100 | 52 | 0 | 46 | 70 | 0.8 |
| May. | 15.2 | 79 | 93 | 0 | 100 | 79 | 0 | 14 | 42 | 0.1 |
| Jun. | 16.9 | 93 | 72 | -21 | 79 | 93 | 0 | 0 | 21 | -0.2 |
| Jul. | 19.2 | 112 | 30 | -79 | 0 | 109 | 3 | 0 | 10 | -0.7 |
| Aug. | 19.6 | 107 | 54 | 0 | 0 | 54 | 53 | 0 | 5 | -0.4 |
| Sep. | 18.5 | 86 | 69 | 0 | 0 | 69 | 17 | 0 | 3 | -0.1 |
| Oct. | 14.6 | 56 | 125 | 69 | 69 | 56 | 0 | 0 | 1 | 1.2 |
| Nov. | 10.3 | 30 | 143 | 31 | 100 | 30 | 0 | 82 | 42 | 3.8 |
| Dec. | 8.2 | 21 | 176 | 0 | 100 | 21 | 0 | 155 | 98 | 7.5 |
| Year | 13.6 | 723 | 1265 | * | * | 651 | 72 | 614 | 614 | * |

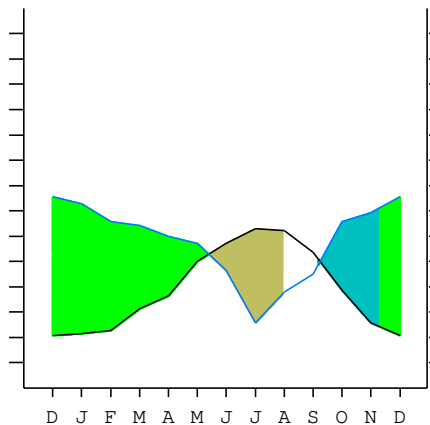
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

SALAS (ESP OVIEDO)

43°24'N 6°15'W 239 m 10/10 y.

T= 13.6 Ic= 11.4 TEMPERATE OCEANIC (SUBMEDITERRANEAN)
 m= 4.5 Tp= 1630 UPPER THERMOTEMPERATE
 M= 12.0 Tn= 0 LOW HUMID
 M' = 31.2 Itc= 301
 m' = -2.0 Io= 7.8
 P= 1265 mm ———
 PE= 723 mm ———

| | |
|-------------|---------|
| Imbibing | 6 Sep. |
| Saturation | 9 Nov. |
| Reserve Use | 12 May. |
| Deficit | 30 Jul. |



SALAS (ESP OVIEDO)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B1a]
 + Type: B. Oceanic
 + Subtype: 1. Semihyperoceanic
 + Variant: a. High

Thermic types [B1.B4]
 + Latitudinal zone: B. Temperate
 + Latitudinal belt: 1. High eutemperate
 + Thermic type: B. Temperate
 + Thermic subtype: 4. Temperate

Bioclimatic types [C3b.2a.7b]
 + Macroclimate: C. TEMPERATE
 + Bioclimate: 3. OCEANIC
 + Bioclimatic variant .: b. SUBMEDITERRANEAN
 + Thermic type.....: 2. THERMOTEMPERATE
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 7. HUMID
 + Ombrothermic subtype : b. LOW

Bioclimatic Classification: Teco (Sbm).Tte.Hum

SALAS (ESP OVIEDO)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 443
 Coldest semester of the year.....(Psw): 822
 Warmest four months period of the year.....(Pcm1): 225
 Following warmest four months period.....(Pcm2): 605
 Positive precipitation dryest 3 months.....(Ppd): 153
 Positive precipitation dryest 2 months.....(Ppd2): 84
 Positive precipitation dryest 1 month.....(Ppd1): 30
 Positive precipitation warmest 3 months.....(Pps): 153
 Positive precipitation warmest 2 months.....(Pps2): 84
 Positive precipitation warmest 1 month.....(Pps1): 54
 Positive precipitation coldest 3 months.....(Ppw): 463
 Positive precipitation coldest 2 months.....(Ppw2): 337
 Positive precipitation coldest 1 month.....(Ppw1): 161

| Seasons | Winter Tr1-W | Spring Tr2-P | Summer Tr3-S | Automn Tr4-F |
|----------|-----------------|-----------------|-----------------|-----------------|
| Rainfall | 463 | 309 | 156 | 337 |

Seasonal rainfall rhythms: W > F > P > S

SALAS (ESP OVIEDO)

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 19.6
 Average coldest month [T].....(Tmin): 8.2
 Maximum temp. warmest month [M].....(Tmmax): 24.4
 Minimum temp. coldest month [m].....(Tmmin): 4.4
 Absolute Max.temp. warmest month [M'].....(Tamax): 31.2
 Absolute Min.temp. coldest month [m'].....(Tamin): -2.0
 First warmest contrasted month [M].....(Tcmax): 20.2 (5)
 First coldest contrasted month [m].....(Tcmin): 10.3 (5)
 Estival temperature.....(Ts): 557
 Positive temperature dryest 3 months.....(Tpd): 573
 Positive temperature dryest 2 months.....(Tpd2): 388
 Positive temperature dryest 1 month.....(Tpd1): 192
 Positive temperature warmest 3 months.....(Tps): 573
 Positive temperature warmest 2 months.....(Tps2): 388
 Positive temperature warmest 1 month.....(Tps1): 196
 Positive temperature coldest 3 months.....(Tpw): 253
 Positive temperature coldest 2 months.....(Tpw2): 164
 Positive temperature coldest 1 month.....(Tpw1): 82

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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 |
| 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 | |

SALAS (ESP OVIEDO)

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.57
 Mediterranean index of July.[PE/P].....(Im1): 3.72
 Mediterranean index of July & August.....(Im2): 2.60
 Mediterranean index of June, July & August....(Im3): 2.00

| Months | Dec. | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. |
|------------|--------------|------|------|------------|------|------|---------------|------|------|------------|------|------|
| Pp(x10) | 1760 | 1610 | 1260 | 1180 | 980 | 930 | 720 | 300 | 540 | 690 | 1250 | 1430 |
| Tp | 82 | 82 | 89 | 112 | 122 | 152 | 169 | 192 | 196 | 185 | 146 | 103 |
| Io (Iom) | 21.5 | 19.6 | 14.2 | 10.5 | 8.03 | 6.12 | 4.26 | 1.56 | 2.76 | 3.73 | 8.56 | 13.9 |
| Seasons | Winter | | | Spring | | | Summer | | | Autumn | | |
| Pp(x10)/Tp | 4630 / 253 | | | 3090 / 386 | | | 1560 / 557 | | | 3370 / 434 | | |
| Io (Iot) | 18.30 | | | 8.005 | | | 2.801 | | | 7.765 | | |
| Semesters | December-May | | | | | | June-November | | | | | |
| Pp(x10)/Tp | 7720 / 639 | | | | | | 4930 / 991 | | | | | |
| Io (Iosm) | 12.08 | | | | | | 4.975 | | | | | |

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 12650/1630=7.76 **There is No Yearly Aridity**

| Months | Dec. | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. |
|---------------------------|------------|------|------|------------|------|------|------------|------|------|------------|------|------|
| Pp [P*10] | 1760 | 1610 | 1260 | 1180 | 980 | 930 | 720 | 300 | 540 | 690 | 1250 | 1430 |
| Tp [T*10] | 82 | 82 | 89 | 112 | 122 | 152 | 169 | 192 | 196 | 185 | 146 | 103 |
| Iom [Pp/Tp] | \$\$ | \$\$ | \$\$ | \$\$ | 803 | 612 | 426 | 156 | 276 | 373 | 856 | \$\$ |
| Avm [200-Iom] | *** | *** | *** | *** | *** | *** | *** | 44 | *** | *** | *** | *** |
| Seasons | Winter | | | Spring | | | Summer | | | Autumn | | |
| Pp / Tp | 4630 / 253 | | | 3090 / 386 | | | 1560 / 557 | | | 3370 / 434 | | |
| Iot [Pp/Tp] | 1830 | | | 801 | | | 280 | | | 776 | | |
| Avs E[Avm<200] | *** | | | *** | | | *** | | | *** | | |
| Strong upper semiarid [1] | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 11.40
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 7.81
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 10.14
 + Hyperoceanic (-20<CI<20)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 0.74
 + Oceanic (0.6<CI<1.1)
 Rainfall Index of Lang (1925) [R=P/T]: 93.13
 + Temperate warm (100>R>60)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 53.64
 + Humid (60>Ia>30)
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: 219.62
 + Humid (Q>90)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 1.07
 + Humid (2>DR>0)
 Aridity Index of UNEP [I=P/PE]: 1.75
 + Humid (I>0.65)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 24.49
 + 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. Termoxeroteric (Mediterranean warm)
 + Thermic type: 4. Mesothermic

| Thornthwaite (1948) | | | | | | | | | | | | |
|------------------------------------------------------------------------------------|------|------|------|------|------|-------------------------------------|------|------|------|------|------|------|
| | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. |
| P-E ratio | 1.01 | 0.75 | 0.64 | 0.51 | 0.44 | 0.31 | 0.11 | 0.21 | 0.29 | 0.62 | 0.82 | 1.11 |
| T-E ratio | 3.69 | 4.00 | 5.04 | 5.49 | 6.84 | 7.60 | 8.64 | 8.82 | 8.32 | 6.57 | 4.64 | 3.69 |
| Precipitation-effectiveness: 68.21 | | | | | | Temperature-efficiency: 73.35 | | | | | | |
| Moisture Index [MI=100*(P-PE)/PE]: 74.92 + B3.Humid high-humid (60<MI<80) | | | | | | | | | | | | |
| Index of dryness [DI=100*d/PE]: 9.98 + No deficit (0<DI<16.7) | | | | | | | | | | | | |
| Index of humidity [HI=100*s/PE]: 84.90 + Strong surplus (20<HI) | | | | | | | | | | | | |
| Potential Evapotranspiration PE: 723.18 + Second mesothermic (712<PE<855) | | | | | | | | | | | | |

