

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 14/02/2020)

CHERDYN (RUSSIA)

Altitude: 206 m.

Latitude: 60°24'N Longitude: 56°31'E

Temperature observation period.: 1984-1994 (11)

Rainfall observation period....: 1984-1994 (11)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	-17.22	-15.00	-19.44	0.00	-43.89	42.7	0.00
Feb.	-13.61	-11.11	-16.11	3.89	-40.00	37.3	0.00
Mar.	-7.78	-4.44	-11.11	8.89	-33.89	42.9	0.00
Apr.	1.39	6.11	-3.33	22.22	-20.00	43.4	13.99
May.	8.89	13.33	4.44	28.89	-10.00	56.1	80.11
Jun.	13.61	18.33	8.89	32.22	-2.22	49.8	120.56
Jul.	17.77	22.22	13.33	32.78	2.78	70.6	149.73
Aug.	14.17	18.33	10.00	27.78	1.11	67.8	107.11
Sep.	7.78	11.11	4.44	26.11	-3.89	62.5	52.29
Oct.	-0.28	1.67	-2.22	15.00	-21.11	67.1	0.00
Nov.	-6.95	-5.00	-8.89	7.78	-35.00	64.5	0.00
Dec.	-14.17	-12.22	-16.11	2.22	-42.22	62.2	0.00
Year	0.30	3.61	-3.01	17.32	-20.69	667	523.79

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	-341
Compensated thermicity index.....(Itc):	-47
Simple continentality index.....(Ic):	35.0
Diurnality index.....(Id):	9.4
Annual ombrothermic index.....(Io):	5.51
Monthly estival ombrothermic index.....(Ios1):	3.97
Bimonthly estival ombrothermic index.....(Ios2):	4.33
Threemonthly estival ombrothermic index.....(Ios3):	4.13
Fourmonthly estival ombrothermic index.....(Ios4):	4.49
Annual ombro-evaporation index.....(Ioe):	1.27
Annual positive temperature.....(Tp):	636
Annual negative temperature.....(Tn):	600
Estival temperature.....(Ts):	456
Positive precipitation.....(Pp):	350

N. of Months	P>4T	P:2T-4T	PT-2T	P<T	T<0
	4	2	0	0	6

Latitudinal Belt...: High Subtemperate

Continentality.....: Continental - Low Eucontinental

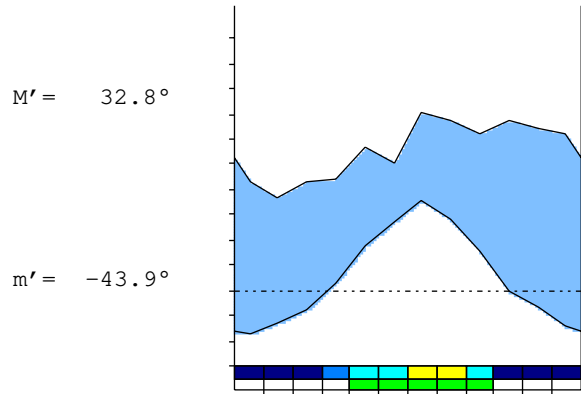
Bioclimate.....: BOREAL CONTINENTAL

Bioclimatic Belt...: LOW MESOBOREAL UPPER SUBHUMID

CHERDYN (RUSSIA)

206 m

P= 667 60° 24'N 56° 31'E 11/11 y.
 T= 0.3 ° Ic= 35.0 Tp= 636 Tn= 600
 m= -19.4 ° M= -15.0 ° Itc= -47 Io= 5.5



BOREAL CONTINENTAL
 LOW MESOBOREAL UPPER SUBHUMID

WATER INDEX CARD CHERDYN (RUSSIA)
 Altitude: 206 m. Latitude: 60° 24'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	-17.2	0	43	0	100	0	0	43	42	*
Feb.	-13.6	0	37	0	100	0	0	37	40	*
Mar.	-7.8	0	43	0	100	0	0	43	41	*
Apr.	1.4	14	43	0	100	14	0	29	35	2.1
May.	8.9	80	56	-24	76	80	0	0	18	-0.2
Jun.	13.6	121	50	-71	5	121	0	0	9	-0.5
Jul.	17.8	150	71	-5	0	76	74	0	4	-0.5
Aug.	14.2	107	68	0	0	68	39	0	2	-0.3
Sep.	7.8	52	63	10	10	52	0	0	1	0.1
Oct.	-0.3	0	67	67	77	0	0	0	1	*
Nov.	-6.9	0	65	23	100	0	0	42	21	*
Dec.	-14.2	0	62	0	100	0	0	62	42	*
Year	0.3	524	667	*	*	411	113	256	256	*

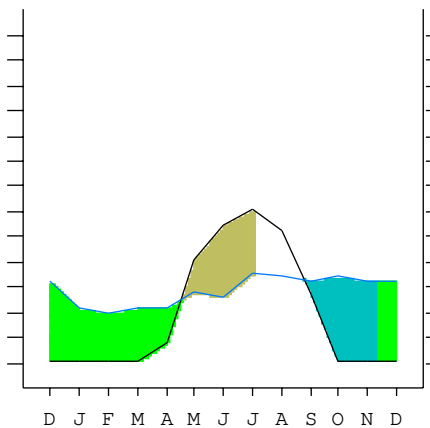
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

CHERDYN (RUSSIA)

60°24'N 56°31'E 206 m 11/11 y.

T= 0.3 Ic= 35.0 BOREAL CONTINENTAL
 m= -19.4 Tp= 636 LOW MESOBOREAL
 M= -15.0 Tn= 600 UPPER SUBHUMID
 M' = 32.8 Itc= -47
 m' = -43.9 Io= 5.5
 P= 667 mm ———
 PE= 524 mm ———

Imbibing	24 Aug.
Saturation	11 Nov.
Reserve Use	17 Apr.
Deficit	2 Jul.



CHERDYN (RUSSIA)

Latitude: 60°24'N Longitude: 56°31'E Altitude: 206 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [C3a]
 + Type: C. Continental
 + Subtype: 3. Eucontinental
 + Variant: a. Low

Thermic types [B2.C7]
 + Latitudinal zone: B. Temperate
 + Latitudinal belt: 2. High Subtemperate
 + Thermic type: C. Cold
 + Thermic subtype: 7. Cold

Bioclimatic types [D3.3b.6a]
 + Macrobioclimate: D. BOREAL
 + Bioclimate: 3. CONTINENTAL
 + Bioclimatic variant .:
 + Thermic type.....: 3. MESOBOREAL
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 6. SUBHUMID
 + Ombrothermic subtype : a. UPPER

Bioclimatic ClassificationBoco.Mbo.Shu.Euc

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 350
 Coldest semester of the year.....(Psw): 317
 Warmest four months period of the year.....(Pcm1): 244
 Following warmest four months period.....(Pcm2): 256
 Positive precipitation dryest 3 months.....(Ppd): 0
 Positive precipitation dryest 2 months.....(Ppd2): 0
 Positive precipitation dryest 1 month.....(Ppd1): 0
 Positive precipitation warmest 3 months.....(Pps): 188
 Positive precipitation warmest 2 months.....(Pps2): 138
 Positive precipitation warmest 1 month.....(Pps1): 71
 Positive precipitation coldest 3 months.....(Ppw): 0
 Positive precipitation coldest 2 months.....(Ppw2): 0
 Positive precipitation coldest 1 month.....(Ppw1): 0

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	142	142	188	194

Seasonal rainfall rhythms: F > S > P > W

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 17.8
 Average coldest month [T].....(Tmin): -17.2
 Maximum temp. warmest month [M].....(Tmax): 22.2
 Minimum temp. coldest month [m].....(Tmin): -19.4
 Absolute Max.temp. warmest month [M'].....(Tamax): 32.8
 Absolute Min.temp. coldest month [m'].....(Tamin): -43.9
 First warmest contrasted month [M].....(Tcmax): 6.1 (4)
 First coldest contrasted month [m].....(Tcmin): -3.3 (4)
 Estival temperature.....(Ts): 456
 Positive temperature dryest 3 months.....(Tpd): 0
 Positive temperature dryest 2 months.....(Tpd2): 0
 Positive temperature dryest 1 month.....(Tpd1): 0
 Positive temperature warmest 3 months.....(Tps): 456
 Positive temperature warmest 2 months.....(Tps2): 319
 Positive temperature warmest 1 month.....(Tps1): 178
 Positive temperature coldest 3 months.....(Tpw): 0
 Positive temperature coldest 2 months.....(Tpw2): 0
 Positive temperature coldest 1 month.....(Tpw1): 0

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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			
Ultragelid...[M' <=0] (Pf)	o											
Hypergelid...[M <=0] (Pf)	o	o	o								o	o
Gelid.....[T <=0] (Pf)	o	o	o							o	o	o
Subgelid.....[m <=0] (Pf)	o	o	o	o						o	o	o
Pregelid.....[m' <=0] (Pf)	o	o	o	o	o	o			o	o	o	o
Agelid.....[m' > 0] (Pf)							o	o				
HiperAgelid..[all>0] (Pf)							o	o				

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.79
 Mediterranean index of July.[PE/P].....(Im1): 2.12
 Mediterranean index of July & August.....(Im2): 1.86
 Mediterranean index of June, July & August....(Im3): 2.01

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp (x10)	*	*	*	*	434	561	498	706	678	625	*	*
Tp	*	*	*	*	14	89	136	178	142	78	*	*
Io (Iom)	*	*	*	*	31.2	6.31	3.66	3.97	4.78	8.03	*	*
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	*/*			*/*			1882 / 456			*/*		
Io (Iot)	*			*			4.132			*		
Semesters	December-May						June-November					
Pp(x10)/Tp	*/*						*/*					
Io (Iosm)	*						*					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 3502/636=5.51 There is No Yearly Aridity

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	*	*	*	*	434	561	498	706	678	625	*	*
Tp [T*10]	*	*	*	*	14	89	136	178	142	78	*	*
Iom [Pp/Tp]	!!	!!	!!	!!	\$\$	631	366	397	478	803	!!	!!
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	***	***
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	* / *			* / *			1882 / 456			* / *		
Iot [Pp/Tp]	**			**			413			**		
Avs E [Avm<200]	***			***			***			***		

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 34.99
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 48.01
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 49.14
 + Subcontinental (40<CI<60)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 1.66
 + Subcontinental (1.1<CI<1.7)
 Rainfall Index of Lang (1925) [R=P/T]:2223.00
 + Humid (R>160)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 64.75
 + Perhumid (Ia>60)
 I of Emberger (1930) [Q=100*P/(Tmmax²-Tmmin²)]: 575.83
 + Humid (Q>90)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 0.04
 + Humid (2>DR>0)
 Aridity Index of UNEP [I=P/PE]: 1.27
 + Humid (I>0.65)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 7.47
 + Very low (K<60)

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate: B. Cold and temperate cold
 + Region: 11. Psicroaxeric (Axeric cold)
 + Thermic type: 7. Hipermicrothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.36	0.31	0.36	0.31	0.30	0.23	0.30	0.32	0.36	0.54	0.56	0.54
T-E ratio	0.00	0.00	0.00	0.63	4.00	6.12	8.00	6.38	3.50	0.00	0.00	0.00
Precipitation-effectiveness: 44.77						Temperature-efficiency: 28.62						
Moisture Index [MI=100*(P-PE)/PE]: 27.32 + B1.Humid low-humid (20<MI<40)												
Index of dryness [DI=100*d/PE]: 21.61 + Moderate deficit (16.7<DI<33.3)												
Index of humidity [HI=100*s/PE]: 48.93 + Strong surplus (20<HI)												
Potential Evapotranspiration PE: 523.79 + Second microthermic (427<PE<570)												

