

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 14/02/2020)

MISHENSKOIE (RUS TULSKAYA)

Altitude: 215 m.

Latitude: 53°47'N Longitude: 36°3'E

Temperature observation period.: 1927-1937 (11)

Rainfall observation period....: 1928-1936 (9)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	-9.50	0.00	-13.20	0.00	-42.00	37.0	0.00
Feb.	-9.10	0.00	-12.80	0.00	-37.00	31.0	0.00
Mar.	-4.50	0.00	-8.00	0.00	-36.00	35.0	0.00
Apr.	4.40	0.00	0.70	0.00	-23.00	36.0	28.22
May.	12.50	0.00	6.80	0.00	-6.00	56.0	89.93
Jun.	16.30	0.00	10.90	0.00	-3.00	63.0	119.37
Jul.	18.40	0.00	13.00	0.00	3.00	75.0	135.03
Aug.	16.80	0.00	11.70	0.00	1.00	71.0	110.68
Sep.	11.30	0.00	6.60	0.00	-7.00	52.0	63.16
Oct.	4.90	0.00	1.40	0.00	-21.00	44.0	24.07
Nov.	-1.40	0.00	-3.80	0.00	-32.00	45.0	0.00
Dec.	-6.80	0.00	-9.60	0.00	-38.00	46.0	0.00
Year	4.44	0.00	0.31	0.00	-20.08	591	570.47

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	-220
Compensated thermicity index.....(Itc):	-101
Simple continentality index.....(Ic):	27.9
Diurnality index.....(Id):	3.7
Annual ombrothermic index.....(Io):	4.69
Monthly estival ombrothermic index.....(Ios1):	3.87
Bimonthly estival ombrothermic index.....(Ios2):	4.15
Threemonthly estival ombrothermic index.....(Ios3):	4.06
Fourmonthly estival ombrothermic index.....(Ios4):	4.14
Annual ombro-evaporation index.....(Ioe):	1.04
Annual positive temperature.....(Tp):	846
Annual negative temperature.....(Tn):	313
Estival temperature.....(Ts):	515
Positive precipitation.....(Pp):	397

N. of Months	P>4T	P:2T-4T	PT-2T	P<T	T<0
	6	1	0	0	5

Latitudinal Belt...: Low Subtemperate

Continentality.....: Continental - High Subcontinental

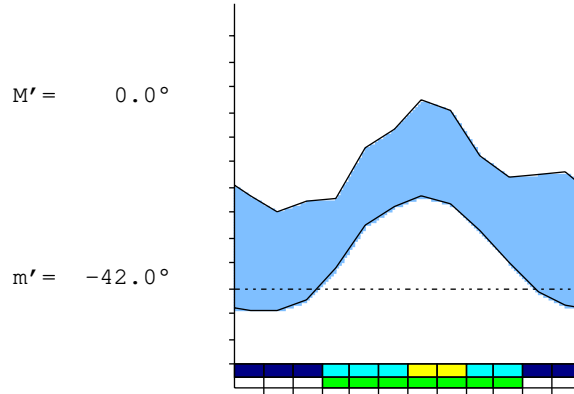
Bioclimate(Variant): TEMPERATE CONTINENTAL (HEMIBOREAL)

Bioclimatic Belt...: UPPER SUPRATEMPERATE (HEMIBOREAL) LOW SUBHUMID

MISHENSKOIE (RUS TULSKAYA)

215 m

P= 591 53° 47'N 36° 3'E 11/9 y.
 T= 4.4 ° Ic= 27.9 Tp= 846 Tn= 313
 m= -13.2 ° M= -13.2 ° Itc= -101 Io= 4.7



TEMPERATE CONTINENTAL (HEMIBOREAL)
 UPPER SUPRATEMPERATE (HEMIBOREAL) LOW SUBHUMID

WATER INDEX CARD MISHENSKOIE (RUS TULSKAYA)
 Altitude: 215 m. Latitude: 53° 47'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	-9.5	0	37	0	100	0	0	37	21	*
Feb.	-9.1	0	31	0	100	0	0	31	26	*
Mar.	-4.5	0	35	0	100	0	0	35	31	*
Apr.	4.4	28	36	0	100	28	0	8	19	0.2
May.	12.5	90	56	-34	66	90	0	0	10	-0.3
Jun.	16.3	119	63	-56	10	119	0	0	5	-0.4
Jul.	18.4	135	75	-10	0	85	50	0	2	-0.4
Aug.	16.8	111	71	0	0	71	40	0	1	-0.3
Sep.	11.3	63	52	0	0	52	11	0	1	-0.1
Oct.	4.9	24	44	20	20	24	0	0	0	0.8
Nov.	-1.4	0	45	45	65	0	0	0	0	*
Dec.	-6.8	0	46	35	100	0	0	11	6	*
Year	4.4	570	591	*	*	469	101	122	122	*

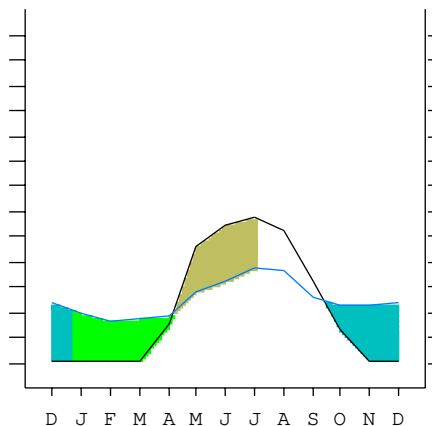
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

MISHENSKOIE (RUS TULSKAYA)

53°47'N 36°3'E 215 m 11/9 y.

T= 4.4 Ic= 27.9 TEMPERATE CONTINENTAL (HEMIBOREAL)
 m= -13.2 Tp= 846 UPPER SUPRATEMPERATE (HEMIBOREAL)
 M= -13.2 Tn= 313 LOW SUBHUMID
 M' = 0.0 Itc= -101
 m' = -42.0 Io= 4.7
 P= 591 mm ———
 PE= 570 mm ———

Imbibing	11 Sep.
Saturation	23 Dec.
Reserve Use	6 Apr.
Deficit	5 Jul.



MISHENSKOIE (RUS TULSKAYA)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [C2b]
 + Type: C. Continental
 + Subtype: 2. Subcontinental
 + Variant: b. High
 Thermic types [B2.C6]
 + Latitudinal zone: B. Temperate
 + Latitudinal belt: 2. Low Subtemperate
 + Thermic type: C. Cold
 + Thermic subtype: 6. Cool
 Bioclimatic types [C2.4a.6b]
 + Macrobioclimate: C. TEMPERATE
 + Bioclimate: 2. CONTINENTAL
 + Bioclimatic variant .: HEMIBOREAL
 + Thermic type.....: 4. SUPRATEMPERATE (HEMIBOREAL)
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 6. SUBHUMID
 + Ombrothermic subtype : b. LOW
 Bioclimatic ClassificationTeco(Hem).Ste.Shu.Suc

MISHENSKOIE (RUS TULSKAYA)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 361
 Coldest semester of the year.....(Psw): 230
 Warmest four months period of the year.....(Pcm1): 265
 Following warmest four months period.....(Pcm2): 187
 Positive precipitation dryest 3 months.....(Ppd): 36
 Positive precipitation dryest 2 months.....(Ppd2): 0
 Positive precipitation dryest 1 month.....(Ppd1): 0
 Positive precipitation warmest 3 months.....(Pps): 209
 Positive precipitation warmest 2 months.....(Pps2): 146
 Positive precipitation warmest 1 month.....(Pps1): 75
 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	114	127	209	141

Seasonal rainfall rhythms: S > F > P > W

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 18.4
 Average coldest month [T].....(Tmin): -9.5
 Maximum temp. warmest month [M].....(Tmmax): 0.0
 Minimum temp. coldest month [m].....(Tmmin): -13.2
 Absolute Max.temp. warmest month [M'].....(Tamax): 0.0
 Absolute Min.temp. coldest month [m'].....(Tamin): -42.0
 First warmest contrasted month [M].....(Tcmax): 0.0 (1)
 First coldest contrasted month [m].....(Tcmin): -13.2 (1)
 Estival temperature.....(Ts): 515
 Positive temperature dryest 3 months.....(Tpd): 44
 Positive temperature dryest 2 months.....(Tpd2): 0
 Positive temperature dryest 1 month.....(Tpd1): 0
 Positive temperature warmest 3 months.....(Tps): 515
 Positive temperature warmest 2 months.....(Tps2): 352
 Positive temperature warmest 1 month.....(Tps1): 184
 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	o	o		
Ultragelid...[M'<=0] (Pf)												
Hypergelid...[M <=0] (Pf)												
Gelid.....[T <=0] (Pf)	o	o	o								o	o
Subgelid.....[m <=0] (Pf)	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): 0.97
 Mediterranean index of July.[PE/P].....(Im1): 1.80
 Mediterranean index of July & August.....(Im2): 1.68
 Mediterranean index of June, July & August....(Im3): 1.75

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	*	*	*	*	360	560	630	750	710	520	440	*
Tp	*	*	*	*	44	125	163	184	168	113	49	*
Io (Iom)	*	*	*	*	8.18	4.48	3.87	4.08	4.23	4.60	8.98	*
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	*/*			*/*			2090 / 515			*/*		
Io (Iot)	*			*			4.058			*		
Semesters	December-May						June-November					
Pp(x10)/Tp	*/*						*/*					
Io (Iosm)	*						*					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 3970/846=4.69 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	*	*	*	*	360	560	630	750	710	520	440	*
Tp [T*10]	*	*	*	*	44	125	163	184	168	113	49	*
Iom [Pp/Tp]	!!	!!	!!	!!	818	448	387	408	423	460	898	!!
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	***	***
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	* / *			* / *			2090 / 515			* / *		
Iot [Pp/Tp]	**			**			406			**		
Avs E [Avm<200]	***			***			***			***		

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 27.90
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 38.39
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 38.87
 + Oceanic (20<CI<40)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 1.47
 + Subcontinental (1.1<CI<1.7)
 Rainfall Index of Lang (1925) [R=P/T]: 133.06
 + Temperate humid (160>R>100)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 40.92
 + Humid (60>Ia>30)
 I of Emberger (1930) [Q=100*P/(Tmmax²-Tmmin²)]:-339.19
 +
 I of Dantin & Revenga (1940) [DR=100*T/P]: 0.75
 + Humid (2>DR>0)
 Aridity Index of UNEP [I=P/PE]: 1.04
 + Humid (I>0.65)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 9.52
 + 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: 6. Microthermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.30	0.25	0.29	0.22	0.27	0.28	0.32	0.31	0.26	0.27	0.37	0.39
T-E ratio	0.00	0.00	0.00	1.98	5.63	7.33	8.28	7.56	5.09	2.21	0.00	0.00
Precipitation-effectiveness: 35.08						Temperature-efficiency: 38.07						
Moisture Index [MI=100*(P-PE)/PE]: 3.60 + C2.Subhumid humid (0<MI<20)												
Index of dryness [DI=100*d/PE]: 17.72 + Moderate deficit (16.7<DI<33.3)												
Index of humidity [HI=100*s/PE]: 21.33 + Strong surplus (20<HI)												
Potential Evapotranspiration PE: 570.47 + First mesothermic (570<PE<712)												

