



Supplement of

Morphometric divergence in *Cyprideis* (Ostracoda) during the Middle and Late Miocene of the Central Paratethys realm

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Table S1 GPS co-ordinates, stratigraphy, identified *Cyprideis* species, and paleoenvironment (according to Geary et al., 2010; Gross et al., 2008; Harzhauser et al., 2002, 2003, 2009; Harzhauser and Tempfer, 2004; Magyar et al., 2007; Pipík, 1998, 2007; Pipík, et al., 2004; Starek et al., 2010).

Locality (Abbreviation)	GPS		Biozones	<i>Cyprideis</i>	Environment
	Longitude	Latitude			
Studienka (STU)	48°30'39''N	017°07'23''E	E/F	<i>heterostigma</i>	Shallow brackish and eutrophicated estuary with freshwater input; clay
Pezinok (PEZ)	48°16'72''N	017°16'34''E	E/F	<i>Cyprideis</i> sp. 2, <i>alberti, seminulum</i>	Littoral, brackish with freshwater influx; mollusk detritus and clay
Sopron (SO)	47°40'59''N	016°37'04''E	E	<i>macrostigma</i>	Brackish sublittoral; clay/silt
Hodonín (HO)	48°52'12''N	017°07'37''E	E	<i>sublittoralis</i>	Brackish sublittoral; clay
Henndersdorf (HE)	48°06'03''N	016°21'17''E	E	<i>obesa</i>	Brackish sublittoral influenced by riverine input; clay
Gbely (GB)	48°42'26''N	017°07'14''E	E	<i>obesa</i>	Brackish sublittoral silt/sand under riverine input
Bratislava (BA)	48°09'15''N	017°04'16''E	D	<i>Cyprideis</i> sp. 1 <i>C. aff. obesa</i>	Brackish littoral / sublittoral; silt and sand
Pellendorf (PEL)	48°29'58''N	016°32'03''E	C	<i>pannonica</i>	Shallow brackish with transition to freshwater lacustrine environment, silt
Stavěšice (STA)	48°59'37''N	017°02'11''E	B	<i>tuberculata</i>	Brackish sublittoral; homogenous, carbonatic silt
Mataschen (MA)	46°54'17''N	015°57'07''E	B	<i>kapfensteinensis</i> <i>mataschensis</i>	Lacustrine, sublittoral, mesohaline; clay Lacustrine, sublittoral, oligo/mesohaline with freshwater input; clay/fine sand
Sankt Margarethen (SM)	47°45'81''N	016°37'90''E	<i>Porosonion granosum</i>	<i>pannonica</i>	Low energetic lacustrine-brackish marshes; marly silt
Skalica (SKA)	48°51'06''N	017°13'20''E	<i>Porosonion granosum</i>	<i>pannonica</i>	Sublittoral, outer brachyhaline estuary; sand

Table S2 Morphological description of the female right valve and hinge elements of the left valve of Lake Pannon species of *Cyprideis* based on Gross (2008), Kollmann (1960), and Pokorný (1952).

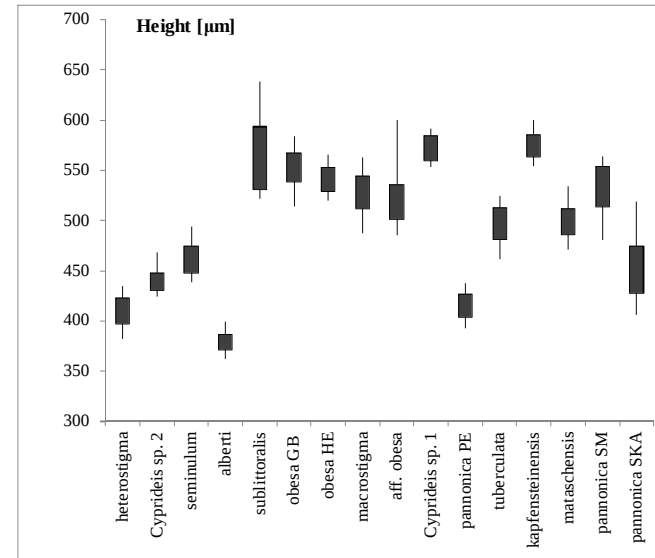
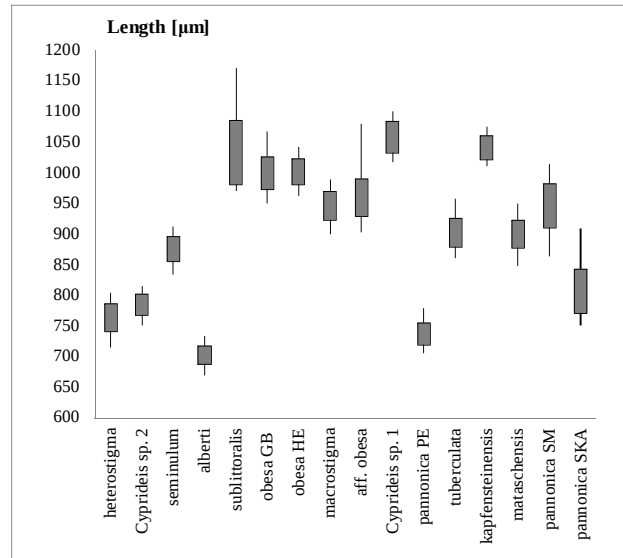
Species		Description
<i>Cyprideis alberti</i> Kollmann, 1960	female RV	Small species with smooth surface; outline sub-elliptical. The dorsal margin is almost parallel to the ventral margin, only slightly curved and sloping forward in the anterior third of the shell. The posterior margin rounded and higher than anterior margin. The ventral margin is slightly concave before the middle of its length. The anteroventral margin is covered with densely spaced short spines (14–18).
	hinge LV	The anterior socket is narrow, coarsely crenulated, with a smooth ventral rim. The short anteromedian tooth is segmented by toothlets. The posteromedian groove is coarsely crenulated. The posterior socket is indistinct and has the same width as the posteromedian groove.
<i>Cyprideis heterostigma</i> (Reuss, 1850)	female RV	Small species covered with pits; outline elongated, sub-elliptical to sub-rectangular. The dorsal margin is largely curved and highest at the middle or slightly behind the middle. The posterior margin slopes vertically, forming rounded corners with the dorsal and ventral margins. The ventral margin is slightly concave before the middle. The dorsal and ventral margins are almost parallel. A short posteroventral list is present.
	hinge LV	The anterior socket is narrow, coarsely crenulated, with a smooth ventral rim. The short anteromedian tooth is very finely crenulated. The posteromedian groove has 2–3 fine elevations within the crenulation. The posterior socket is crenulated and has a smooth, narrow ventral rim.
<i>Cyprideis kapfensteinensis</i> Gross, 2008	female RV	A large-sized species covered with pits; outline sub-ovate. The dorsal margin is straight to largely curved and highest at the middle. The posterior margin is slightly rounded. The ventral margin is slightly concave at the middle or somewhat behind its midpoint. The valve usually carries one posteroventral spine.
	hinge LV	The anterior socket is narrow and has a smooth ventral rim. The elongated anteromedian tooth is composed of fused toothlets. The posteromedian groove is crenulated. The finely crenulated posterior socket has a narrow, smooth ventral rim.
<i>Cyprideis macrostigma</i> Kollmann, 1960	female RV	Large species covered with pits, outline sub-ovate. The dorsal margin is largely curved and highest before the middle; it is almost straight behind the middle. The posterior margin is rounded with a fine concavity in the middle. The ventral margin is concave in the middle to nearly straight. One posteroventral spine is present.
	hinge LV	The anterior socket is very wide with a very narrow ventral rim. The finely crenulated anteromedian tooth consists of one elongated tooth and one small, elliptical tooth. The posteromedian groove is finely crenulated and has a thick, smooth ventral rim. The crenulated posterior socket has a smooth ventral rim.
<i>Cyprideis mataschensis</i> Gross, 2008	female RV	A medium-sized species covered with pits; outline sub-ovate. The dorsal margin is curved and highest before the middle. The posterior margin is slightly rounded to almost vertical. The ventral margin is slightly concave at the middle of its length. Three posteroventral spines are present.
	hinge LV	The anterior socket is wide, with fine elevations within the crenulations. There is a thick, smooth ventral rim. The elongated anteromedian tooth consists of almost entirely fused toothlets. The posteromedian groove is coarsely crenulated. The crenulated posterior socket has a smooth, wide ventral rim.
	female RV	A large and robust species covered with pits; outline sub-ovate to sub-elliptical. The dorsal margin is slightly curved or nearly straight, with the highest point at the middle (<i>obesa</i> GB) or just before the middle (<i>obesa</i> HE). The posterior margin is rounded. The ventral margin is slightly concave before (<i>obesa</i> GB) or behind the middle (<i>obesa</i> HE). Three or four strong posteroventral spines are present.

<i>Cyprideis obesa</i> (Reuss, 1850)	hinge LV	The crenulated anterior socket is of medium width (<i>obesa</i> GB) or very wide (<i>obesa</i> HE), with fine elevations within the crenulations. There is a strong, smooth ventral rim. The striae are visible above the anterior socket of <i>obesa</i> HE. The elongated anteromedian tooth is finely crenulated to nearly smooth. The posteromedian groove is very finely crenulated. The posterior socket is crenulated with fine elevations. The ventral rim below the posterior socket is narrow (<i>obesa</i> GB) or wide (<i>obesa</i> HE).
<i>Cyprideis</i> aff. <i>obesa</i> (Reuss, 1850)	female RV	A large and robust species covered with pits; outline sub-ovate to sub-rectangular. The dorsal margin is long and slightly curved, with the highest point just before the middle. The posterior margin is rounded or almost straight and vertical. The ventral margin is slightly concave in the middle. Three strong posteroventral spines are present.
	hinge LV	The crenulated anterior socket is wide, with a strong, smooth ventral rim. The striae are visible above the anterior socket. The elongated anteromedian tooth is smooth. The posteromedian groove is very narrow and finely crenulated. The posterior socket is crenulated, and the ventral rim below it is very wide.
<i>Cyprideis</i> <i>pannonica</i> (Méhes, 1908)	female RV	A small species covered with very fine pits. The dorsal margin is curved and highest in the middle. The posterior margin is slightly curved to straight. The ventral margin is concave in the middle or just before the middle of its length. One small posteroventral spine is present.
	hinge LV	The crenulated anterior socket is narrow and has a narrow ventral rim. The elongated anteromedian tooth is finely crenulated or bilobate. The posteromedian groove is finely crenulated. The posterior socket is crenulated.
<i>Cyprideis</i> <i>seminulum</i> (Reuss, 1850)	female RV	A small species has the smooth or extremely finely punctuated valves; outline elongated, sub-elliptic. The dorsal margin largely curved and highest behind the middle. The posterior margin is slightly curved and slopes vertically. The ventral margin is sigmoidal and parallel with dorsal margin.
	hinge LV	The anterior socket is coarsely crenulated, with fine elevations within the crenulations. There is a smooth ventral rim. The short anteromedian tooth is very finely crenulated. The posteromedian groove contains 1–2 fine elevations within the crenulations. The elevations in the posterior socket are separated by narrow furrows. There is a smooth ventral rim.
<i>Cyprideis</i> <i>sublittoralis</i> Pokorný, 1952	female RV	A large and robust species covered with pits; outline sub-elliptical. The dorsal margin is slightly curved, almost straight. The posterior margin is rounded. The ventral margin is slightly concave to almost straight and parallel to the dorsal margin. One small posteroventral spine is present.
	hinge LV	The anterior socket is very narrow and very finely crenulated. There is a very gentle ventral rim at the distal part of the socket. There is an elongated, narrow, very finely crenulated or almost smooth anteromedian tooth. The posteromedian groove is very narrow and very finely crenulated. The posterior socket is finely crenulated. There is a smooth and narrow ventral rim.
<i>Cyprideis</i> <i>tuberculata</i> (Méhes, 1908)	female RV	A medium-sized species covered with large pits; outline sub-ovate. The dorsal margin is almost symmetrically curved, with the highest point in the middle. The posterior margin is vertical, slightly curved to straight. The ventral margin is largely concave. One small posteroventral spine is present.
	hinge LV	The anterior socket is finely crenulated. There is a narrow ventral rim. The elongated anteromedian tooth is finely crenulated or nearly smooth. The posteromedian groove is finely crenulated. The posterior socket is crenulated.
<i>Cyprideis</i> sp. 1	female RV	A large and robust species covered with pits; outline sub-ovate to sub-rectangular. The dorsal margin is long and slightly curved, with the highest point in the middle. The posterior margin is almost straight and vertical. The ventral margin is slightly concave behind the middle. One posteroventral spine is present.
	hinge LV	The crenulated anterior socket is very wide, with a strong, smooth ventral rim. The elongated anteromedian tooth consists of almost entirely fused toothlets. The very narrow posteromedian groove is finely crenulated to smooth. The posterior socket is crenulated, and the ventral rim below it is very narrow.

<i>Cyprideis</i> sp. 2	female RV	A small species covered with pits; out-line sub-ovate. The dorsal margin is strongly curved, with the highest point before the middle. The posterior margin slightly rounded and oblique. The ventral margin is straight. One tiny posteroventral spine is present.
	hinge LV	The anterior socket is crenulated, with strong ventral rim. The striae are visible above the anterior socket. The elongated anteromedian tooth is robust and composed of six toothlets. The posteromedian groove is coarsely crenulated. The crenulated posterior socket is inconspicuous and has almost the same width as the posteromedian groove.

Table S3 Basic morphometric characteristics and original measurements of the treated right female valves.
N – total number of the individuals, SD – standard deviation.

Length [μm]	<i>heterostigma</i>	<i>Cyprideis</i> sp. 2	<i>seminulum</i>	<i>alberti</i>	<i>sublittoralis</i>	<i>obesa</i> GB	<i>obesa</i> HE	<i>macrostigma</i>	<i>aff. obesa</i>	<i>Cyprideis</i> sp. 1	<i>pannonica</i> PE	<i>tuberculata</i>	<i>kapfensteinensis</i>	<i>mataschensis</i>	<i>pannonica</i> SM	<i>pannonica</i> SKA
N	26	29	30	29	29	30	29	20	61	14	29	30	24	68	30	29
SD	22,59	17,00	20,26	14,93	52,68	26,59	20,68	23,23	30,51	26,25	18,63	23,65	19,49	22,03	35,85	36,02
mean+	786,59	802,00	896,26	716,93	1085,68	1025,59	1022,68	969,23	989,51	1084,25	755,63	925,65	1060,49	922,03	981,85	843,02
max	803	815	912	733	1171	1067	1041	989	1079	1099	779	957	1075	949	1014	909
min	715	750	834	669	970	949	962	899	903	1016	705	860	1010	847	863	750
mean-	741,41	768,00	855,74	687,07	980,32	972,41	981,32	922,77	928,49	1031,75	718,37	878,35	1021,51	877,97	910,15	770,98
mean	764	785	876	702	1033	999	1002	946	959	1058	737	902	1041	900	946	807



Height [μm]	<i>heterostigma</i>	<i>Cyprideis</i> sp. 2	<i>seminulum</i>	<i>alberti</i>	<i>sublittoralis</i>	<i>obesa</i> GB	<i>obesa</i> HE	<i>macrostigma</i>	<i>aff. obesa</i>	<i>Cyprideis</i> sp. 1	<i>pannonica</i> PE	<i>tuberculata</i>	<i>kapfensteinensis</i>	<i>mataschensis</i>	<i>pannonica</i> SM	<i>pannonica</i> SKA
N	26	29	30	29	29	30	29	20	61	14	29	30	24	68	30	29
SD	13,30	8,56	13,59	7,52	31,46	14,16	11,61	16,48	17,16	12,60	11,49	15,43	10,89	12,67	20,12	23,70
mean+	423,30	447,56	474,59	386,52	593,46	567,16	552,61	544,48	535,16	584,60	426,49	512,43	584,89	511,67	554,12	474,70
max	434	468	494	399	638	583	565	562	600	591	437	524	600	534	563	518
min	382	424	438	362	521	514	519	487	485	553	392	461	554	471	480	406
mean-	396,70	430,44	447,41	371,48	530,54	538,84	529,39	511,52	500,84	559,40	403,51	481,57	563,11	486,33	513,88	427,30
mean	410	439	461	379	562	553	541	528	518	572	415	497	574	499	534	451

Cyprideis heterostigma , locality Studienka

TPS.file in Mendeley Data		Length [μm]	Height [μm]
5089	EhefRVStudienka8+9	1	726
5090	EhefRVStudienka8+9	2	759
5091	EhefRVStudienka8+9	3	760
5092	EhefRVStudienka8+9	4	782
5093	EhefRVStudienka8+9	5	741
5094	EhefRVStudienka8+9	6	760
5095	EhefRVStudienka8+9	7	728
5096	EhefRVStudienka8+9	8	779
5097	EhefRVStudienka8+9	9	764
5098	EhefRVStudienka8+9	10	789
5099	EhefRVStudienka8+9	11	773
5100	EhefRVStudienka8+9	12	758
5101	EhefRVStudienka8+9	13	769
5102	EhefRVStudienka8+9	14	789
5103	EhefRVStudienka8+9	15	755
5104	EhefRVStudienka8+9	16	760
5105	EhefRVStudienka8+9	17	766
5106	EhefRVStudienka8+9	18	776
5107	EhefRVStudienka8+9	19	798
5108	EhefRVStudienka8+9	20	792
5109	EhefRVStudienka8+9	21	745
5110	EhefRVStudienka8+9	22	775
5111	EhefRVStudienka8+9	23	715
5112	EhefRVStudienka8+9	24	734
5113	EhefRVStudienka8+9	25	766
5114	EhefRVStudienka8+9	26	803

Mendeley Data <https://data.mendeley.com/datasets/nvs5xhcr63/2>

Cyprideis sp. 2, locality Pezinok

TPS.file in Mendeley Data			Length [μm]	Height [μm]	
5257	ErefRV	Pezinok36+37	1	804	442
5258	ErefRV	Pezinok36+37	2	770	431
5259	ErefRV	Pezinok36+37	3	776	432
5260	ErefRV	Pezinok36+37	4	786	436
5261	ErefRV	Pezinok36+37	5	793	443
5262	ErefRV	Pezinok36+37	6	761	434
5263	ErefRV	Pezinok36+37	7	756	429
5264	ErefRV	Pezinok36+37	8	750	430
5265	ErefRV	Pezinok36+37	9	790	451
5266	ErefRV	Pezinok36+37	10	773	429
5267	ErefRV	Pezinok36+37	11	812	461
5268	ErefRV	Pezinok36+37	12	809	468
5269	ErefRV	Pezinok36+37	13	811	441
5271	ErefRV	Pezinok36+37	15	813	450
5272	ErefRV	Pezinok36+37	16	769	434
5273	ErefRV	Pezinok36+37	17	808	447
5274	ErefRV	Pezinok36+37	18	803	448
5275	ErefRV	Pezinok36+37	19	778	436
5276	ErefRV	Pezinok36+37	20	788	433
5277	ErefRV	Pezinok36+37	21	772	425
5278	ErefRV	Pezinok36+37	22	768	428
5279	ErefRV	Pezinok36+37	23	815	448
5280	ErefRV	Pezinok36+37	24	792	449
5281	ErefRV	Pezinok36+37	25	765	424
5282	ErefRV	Pezinok36+37	26	771	442
5283	ErefRV	Pezinok36+37	27	772	441
5284	ErefRV	Pezinok36+37	28	800	449
5285	ErefRV	Pezinok36+37	29	804	434
5286	ErefRV	Pezinok36+37	30	751	425

Mendeley Data <https://data.mendeley.com/datasets/nvs5xhcr63/2>

Cyprideis seminulum, locality Pezinok

TPS.file in Mendeley Data		Length [μm]	Height [μm]
5030	EsefRVPezinok36+37	1	879
5031	EsefRVPezinok36+37	2	903
5032	EsefRVPezinok36+37	3	834
5033	EsefRVPezinok36+37	4	839
5034	EsefRVPezinok36+37	5	885
5035	EsefRVPezinok36+37	6	854
5036	EsefRVPezinok36+37	7	891
5037	EsefRVPezinok36+37	8	876
5038	EsefRVPezinok36+37	9	887
5039	EsefRVPezinok36+37	10	848
5040	EsefRVPezinok36+37	11	849
5041	EsefRVPezinok36+37	12	909
5042	EsefRVPezinok36+37	13	894
5043	EsefRVPezinok36+37	14	861
5044	EsefRVPezinok36+37	15	878
5045	EsefRVPezinok36+37	16	880
5046	EsefRVPezinok36+37	17	860
5047	EsefRVPezinok36+37	18	881
5048	EsefRVPezinok36+37	19	896
5049	EsefRVPezinok36+37	20	873
5050	EsefRVPezinok36+37	21	845
5051	EsefRVPezinok36+37	22	883
5052	EsefRVPezinok36+37	23	895
5053	EsefRVPezinok36+37	24	861
5054	EsefRVPezinok36+37	25	868
5055	EsefRVPezinok36+37	26	885
5056	EsefRVPezinok36+37	27	869
5057	EsefRVPezinok36+37	28	886
5058	EsefRVPezinok36+37	29	885
5059	EsefRVPezinok36+37	30	912

Mendeley Data <https://data.mendeley.com/datasets/nvs5xhcr63/2>

Cyprideis alberti , locality Pezinok

TPS.file in Mendeley Data		Length [μm]	Height [μm]
5000 EalfRVPezinok36+37	1	669	362
5001 EalfRVPezinok36+37	2	685	374
5002 EalfRVPezinok36+37	3	699	382
5003 EalfRVPezinok36+37	4	711	391
5004 EalfRVPezinok36+37	5	684	366
5005 EalfRVPezinok36+37	6	694	368
5006 EalfRVPezinok36+37	7	704	382
5007 EalfRVPezinok36+37	8	733	399
5008 EalfRVPezinok36+37	9	672	363
5009 EalfRVPezinok36+37	10	701	378
5010 EalfRVPezinok36+37	11	703	377
5011 EalfRVPezinok36+37	12	714	392
5012 EalfRVPezinok36+37	13	703	373
5013 EalfRVPezinok36+37	14	697	374
5014 EalfRVPezinok36+37	15	711	387
5015 EalfRVPezinok36+37	16	714	386
5017 EalfRVPezinok36+37	18	701	376
5018 EalfRVPezinok36+37	19	709	383
5019 EalfRVPezinok36+37	20	705	387
5020 EalfRVPezinok36+37	21	715	378
5021 EalfRVPezinok36+37	22	707	378
5022 EalfRVPezinok36+37	23	706	384
5023 EalfRVPezinok36+37	24	681	365
5024 EalfRVPezinok36+37	25	692	381
5025 EalfRVPezinok36+37	26	709	382
5026 EalfRVPezinok36+37	27	712	382
5027 EalfRVPezinok36+37	28	709	380
5028 EalfRVPezinok36+37	29	719	388
5029 EalfRVPezinok36+37	30	704	380

Mendeley Data <https://data.mendeley.com/datasets/nvs5xhcr63/2>

Cyprideis sublittoralis, locality Hodonín

TPS.file in Mendeley Data			Length [μm]	Height [μm]
3926	EsufRVHodonin5	1	1126	611
3927	EsufRVHodonin5	2	1079	587
3928	EsufRVHodonin5	3	1062	580
3929	EsufRVHodonin5	4	1171	638
3930	EsufRVHodonin5	5	1065	590
3931	EsufRVHodonin5	6	999	556
3932	EsufRVHodonin5	7	1051	575
3933	EsufRVHodonin5	8	997	542
3934	EsufRVHodonin5	9	1134	618
3935	EsufRVHodonin5	10	1013	556
3936	EsufRVHodonin5	11	984	542
3937	EsufRVHodonin5	12	982	524
3939	EsufRVHodonin5	14	1033	563
3940	EsufRVHodonin5	15	1000	521
3941	EsufRVHodonin5	16	1007	538
3942	EsufRVHodonin5	17	993	538
3943	EsufRVHodonin5	18	1003	536
3944	EsufRVHodonin5	19	1001	544
3945	EsufRVHodonin5	20	1033	554
3946	EsufRVHodonin5	21	995	542
3947	EsufRVHodonin5	22	1055	572
3948	EsufRVHodonin5	23	1021	546
3949	EsufRVHodonin5	24	1113	603
3950	EsufRVHodonin5	25	979	527
3951	EsufRVHodonin5	26	1090	618
3952	EsufRVHodonin5	27	970	534
3953	EsufRVHodonin5	28	1005	540
3954	EsufRVHodonin5	29	995	548
3955	EsufRVHodonin5	30	994	558

Mendeley Data <https://data.mendeley.com/datasets/nvs5xhcr63/2>

Cyprideis obesa , locality Gbely

TPS.file in Mendeley Data			Length [μm]	Height [μm]
3866	EobfRVGbely	9-1	996	561
3867	EobfRVGbely	9-2	1038	567
3868	EobfRVGbely	9-3	1021	552
3869	EobfRVGbely	9-4	985	549
3870	EobfRVGbely	9-5	1023	567
3871	EobfRVGbely	9-6	1013	555
3872	EobfRVGbely	9-7	1027	560
3873	EobfRVGbely	9-8	1000	554
3874	EobfRVGbely	9-9	949	531
3875	EobfRVGbely	9-10	982	534
3876	EobfRVGbely	9-11	1032	573
3877	EobfRVGbely	9-12	955	514
3878	EobfRVGbely	9-13	1018	581
3879	EobfRVGbely	9-14	961	548
3880	EobfRVGbely	9-15	1014	555
3881	EobfRVGbely	9-16	1017	559
3882	EobfRVGbely	9-17	981	546
3883	EobfRVGbely	9-18	1067	583
3884	EobfRVGbely	9-19	973	545
3885	EobfRVGbely	9-20	967	544
3886	EobfRVGbely	9-21	993	548
3887	EobfRVGbely	9-22	976	545
3888	EobfRVGbely	9-23	1020	556
3889	EobfRVGbely	9-24	984	547
3890	EobfRVGbely	9-25	995	551
3891	EobfRVGbely	9-26	987	556
3892	EobfRVGbely	9-27	983	540
3893	EobfRVGbely	9-28	992	540
3894	EobfRVGbely	9-29	1014	560
3895	EobfRVGbely	9-30	999	560

Mendeley Data <https://data.mendeley.com/datasets/nvs5xhcr63/2>

Cyprideis obesa , locality Hennersdorf

TPS.file in Mendeley Data				Length [μm]	Height [μm]
692 E__RV	1	HEN 27		993	544
693 E__RV	2	HEN 27		1020	551
694 E__RV	3	HEN 27		1015	557
695 E__RV	4	HEN 27		989	526
696 E__RV	5	HEN 27		1013	545
697 E__RV	6	HEN 27		983	535
698 E__RV	7	HEN 27		1018	541
699 E__RV	8	HEN 27		962	519
700 E__RV	9	HEN 27		1023	565
701 E__RV	10	HEN 27		1002	548
702 E__RV	11	HEN 27		993	538
703 E__RV	12	HEN 27		992	530
704 E__RV	13	HEN 27		971	537
705 E__RV	14	HEN 27		1022	548
706 E__RV	15	HEN 27		967	522
707 E__RV	16	HEN 27		1023	547
708 E__RV	17	HEN 27		1000	526
709 E__RV	18	HEN 27		989	532
710 E__RV	19	HEN 27		990	522
711 E__RV	20	HEN 27		1010	544
712 E__RV	21	HEN 27		1041	554
713 E__RV	22	HEN 27		1006	545
714 E__RV	23	HEN 27		1006	535
715 E__RV	24	HEN 27		986	544
716 E__RV	25	HEN 27		980	531
717 E__RV	26	HEN 27		1027	555
718 E__RV	27	HEN 27		1010	551
719 E__RV	28	HEN 27		1041	552
720 E__RV	29	HEN 27		983	538

Mendeley Data <https://data.mendeley.com/datasets/nvs5xhcr63/2>

Cyprideis macrostigma , locality Sopron

TPS.file in Mendeley Data			Length [μm]	Height [μm]
E__RV	4	SOPR9	942	524
E__RV	5	SOPR9	968	548
E__RV	6	SOPR9	974	540
E__RV	9	SOPR9	940	539
E__RV	10	SOPR9	938	519
E__RV	11	SOPR9	926	526
E__RV	12	SOPR9	948	534
E__RV	13	SOPR9	968	535
E__RV	15	SOPR9	954	532
E__RV	16	SOPR9	954	526
E__RV	18	SOPR9	899	487
E__RV	19	SOPR9	942	530
E__RV	20	SOPR9	908	509
E__RV	22	SOPR9	931	523
E__RV	23	SOPR9	920	505
E__RV	26	SOPR9	973	549
E__RV	27	SOPR9	989	562
E__RV	28	SOPR9	968	524
E__RV	29	SOPR9	935	523
E__RV	30	SOPR9	936	521

Mendeley Data <https://data.mendeley.com/datasets/nvs5xhcr63/2>

Cyprideis aff. *obesa* , locality Bratislava

TPS.file in Mendeley Data				Length [μm]	Height [μm]
6428	Eob_fRV	BaMatFyz43_57	1	915	508
6429	Eob_fRV	BaMatFyz43_57	2	994	529
6431	Eob_fRV	BaMatFyz43_57	4	978	535
6432	Eob_fRV	BaMatFyz43_57	5	987	517
6433	Eob_fRV	BaMatFyz43_57	6	974	534
6434	Eob_fRV	BaMatFyz43_57	7	955	510
6435	Eob_fRV	BaMatFyz43_57	8	982	510
6447	Eob_fRV	BaMatFyz43_57	10	956	519
6448	Eob_fRV	BaMatFyz43_57	11	980	515
6449	Eob_fRV	BaMatFyz43_57	12	913	513
6450	Eob_fRV	BaMatFyz43_57	13	951	511
6452	Eob_fRV	BaMatFyz43_57	15	945	502
6455	Eob_fRV	BaMatFyz43_57	18	961	516
6456	Eob_fRV	BaMatFyz43_57	19	983	529
6457	Eob_fRV	BaMatFyz43_57	20	960	528
6458	Eob_fRV	BaMatFyz43_57	21	920	516
6459	Eob_fRV	BaMatFyz43_57	22	1009	548
6460	Eob_fRV	BaMatFyz43_57	23	996	515
6461	Eob_fRV	BaMatFyz43_57	24	932	517
6462	Eob_fRV	BaMatFyz43_57	25	919	509
6463	Eob_fRV	BaMatFyz43_57	26	962	505
6464	Eob_fRV	BaMatFyz43_57	27	924	507
6465	Eob_fRV	BaMatFyz43_57	28	935	503
6467	Eob_fRV	BaMatFyz43_57	30	963	524
6468	Eob_fRV	BaMatFyz43_57	31	968	506
6375	Eob_fLV	BaMatFyz43_57	32	1079	600
6472	Eob_fRV	BaMatFyz43_57	35	947	517
6473	Eob_fRV	BaMatFyz43_57	36	1014	574
6475	Eob_fRV	BaMatFyz43_57	38	1006	520
6476	Eob_fRV	BaMatFyz43_57	39	920	501
6477	Eob_fRV	BaMatFyz43_57	40	966	519
6478	Eob_fRV	BaMatFyz43_57	41	954	517
6479	Eob_fRV	BaMatFyz43_57	42	963	522
6480	Eob_fRV	BaMatFyz43_57	43	940	501
6481	Eob_fRV	BaMatFyz43_57	44	958	520
6482	Eob_fRV	BaMatFyz43_57	45	937	508
6483	Eob_fRV	BaMatFyz43_57	46	952	485
6484	Eob_fRV	BaMatFyz43_57	47	995	518
6486	Eob_fRV	BaMatFyz43_57	49	903	504
6487	Eob_fRV	BaMatFyz43_57	50	924	507
6488	Eob_fRV	BaMatFyz43_57	51	961	523
6490	Eob_fRV	BaMatFyz43_57	53	930	522
6491	Eob_fRV	BaMatFyz43_57	54	958	519
6492	Eob_fRV	BaMatFyz43_57	55	996	537
6493	Eob_fRV	BaMatFyz43_57	56	964	526
6494	Eob_fRV	BaMatFyz43_57	57	968	516
6496	Eob_fRV	BaMatFyz43_57	59	998	532
6500	Eob_fRV	BaMatFyz43_57	63	942	512
6501	Eob_fRV	BaMatFyz43_57	64	970	513
6502	Eob_fRV	BaMatFyz43_57	65	966	518
6503	Eob_fRV	BaMatFyz43_57	66	961	512
6504	Eob_fRV	BaMatFyz43_57	67	982	517

6505	Eob_fRV	BaMatFyz43_57	68	966	523
6506	Eob_fRV	BaMatFyz43_57	69	950	510
6507	Eob_fRV	BaMatFyz43_57	70	927	495
6508	Eob_fRV	BaMatFyz43_57	71	934	510
6510	Eob_fRV	BaMatFyz43_57	73	954	510
6511	Eob_fRV	BaMatFyz43_57	74	952	521
6512	Eob_fRV	BaMatFyz43_57	75	968	530
6514	Eob_fRV	BaMatFyz43_57	77	911	497
6517	Eob_fRV	BaMatFyz43_57	80	932	497

Mendeley Data <https://data.mendeley.com/datasets/nvs5xhcr63/2>

Cyprideis sp. 1, locality Bratislava

TPS.file in Mendeley Data				Length [μm]	Height [μm]
6430	Eob_fRV	BaMatFyz43_57	3	1088	580
6436	Eob_fRV	BaMatFyz43_57	9	1032	565
6451	Eob_fRV	BaMatFyz43_57	14	1082	589
6453	Eob_fRV	BaMatFyz43_57	16	1016	554
6466	Eob_fRV	BaMatFyz43_57	29	1082	582
6470	Eob_fRV	BaMatFyz43_57	33	1038	563
6474	Eob_fRV	BaMatFyz43_57	37	1082	584
6485	Eob_fRV	BaMatFyz43_57	48	1037	553
6489	Eob_fRV	BaMatFyz43_57	52	1028	560
6495	Eob_fRV	BaMatFyz43_57	58	1046	576
6499	Eob_fRV	BaMatFyz43_57	62	1070	579
6509	Eob_fRV	BaMatFyz43_57	72	1046	563
6513	Eob_fRV	BaMatFyz43_57	76	1099	591
6515	Eob_fRV	BaMatFyz43_57	78	1064	571

Mendeley Data <https://data.mendeley.com/datasets/nvs5xhcr63/2>

Cyprideis pannonica , locality Pellendorf

TPS.file in Mendeley Data			Length [μm]	Height [μm]
4034	EpafRVPellendorf	4-1	728	412
4035	EpafRVPellendorf	4-2	717	415
4036	EpafRVPellendorf	4-3	745	423
4037	EpafRVPellendorf	4-4	728	408
4038	EpafRVPellendorf	4-5	737	414
4039	EpafRVPellendorf	4-6	757	427
4040	EpafRVPellendorf	4-7	737	415
4041	EpafRVPellendorf	4-8	740	419
4042	EpafRVPellendorf	4-9	721	400
4043	EpafRVPellendorf	4-10	720	410
4044	EpafRVPellendorf	4-11	743	421
4045	EpafRVPellendorf	4-12	751	415
4046	EpafRVPellendorf	4-13	719	402
4047	EpafRVPellendorf	4-14	752	416
4048	EpafRVPellendorf	4-15	743	415
4049	EpafRVPellendorf	4-16	719	400
4050	EpafRVPellendorf	4-17	779	437
4051	EpafRVPellendorf	4-18	721	409
4052	EpafRVPellendorf	4-19	744	428
4053	EpafRVPellendorf	4-20	719	405
4054	EpafRVPellendorf	4-21	705	392
4055	EpafRVPellendorf	4-22	728	408
4056	EpafRVPellendorf	4-23	750	420
4058	EpafRVPellendorf	4-25	742	420
4059	EpafRVPellendorf	4-26	756	422
4060	EpafRVPellendorf	4-27	708	415
4061	EpafRVPellendorf	4-28	757	422
4062	EpafRVPellendorf	4-29	759	428
4063	EpafRVPellendorf	4-30	745	419

Mendeley Data <https://data.mendeley.com/datasets/nvs5xhcr63/2>

Cyprideis tuberculata , locality Stavěšice

TPS.file in Mendeley Data				Length [μm]	Height [μm]
E__RV	1	STAV9		890	495
E__RV	4	STAV9		896	495
E__RV	5	STAV9		897	499
E__RV	6	STAV9		892	491
E__RV	7	STAV9		883	492
E__RV	8	STAV9		891	489
E__RV	9	STAV9		862	467
E__RV	10	STAV9		872	489
E__RV	11	STAV9		885	480
E__RV	12	STAV9		904	510
E__RV	13	STAV9		912	504
E__RV	14	STAV9		897	483
E__RV	15	STAV9		945	524
E__RV	16	STAV9		914	521
E__RV	17	STAV9		885	483
E__RV	18	STAV9		885	496
E__RV	19	STAV9		927	506
E__RV	20	STAV9		899	472
E__RV	21	STAV9		957	507
6533 EtufRV	Stavesice9	577		917	509
6534 EtufRV	Stavesice9	578		923	512
6535 EtufRV	Stavesice9	579		907	506
6536 EtufRV	Stavesice9	580		930	508
6537 EtufRV	Stavesice9	581		891	489
6538 EtufRV	Stavesice9	582		908	500
6539 EtufRV	Stavesice9	583		897	514
6540 EtufRV	Stavesice9	584		941	518
6541 EtufRV	Stavesice9	585		877	495
6542 EtufRV	Stavesice9	586		860	461
6543 EtufRV	Stavesice9	587		929	508

Mendeley Data <https://data.mendeley.com/datasets/nvs5xhcr63/2>

Cyprideis kapfensteinensis , locality Mataschen

TPS.file in Mendeley Data	Length [µm]	Height [µm]
6882E_macr_fRVMA7_1,5-2	1047	578
6883E_macr_fRVMA7_1,5-2	1074	571
6884E_macr_fRVMA7_1,5-2	1059	592
6890E_macr_fRVMA7_22-22,5	1034	570
6893E_macr_fRVMA7_23-23,5	1029	570
6894E_macr_fRVMA7_23-23,5	1033	566
6899E_macr_fRVMA7_27-27,5	1020	577
6900E_macr_fRVMA7_27-27,5	1021	556
6901E_macr_fRVMA7_27-27,5	1015	561
6902E_macr_fRVMA7_27-27,5	1056	577
6905E_macr_fRVMA7_28,5-29	1038	578
6906E_macr_fRVMA7_28,5-29	1050	576
6907E_macr_fRVMA7_28,5-29	1010	554
6910E_macr_fRVMA8_28,5-29	1066	583
6912E_macr_fRVMA8_30,5-31	1055	584
6913E_macr_fRVMA8_30,5-31	1029	572
6916E_macr_fRVMA8_33,5-34	1062	568
6922E_macr_fRVMA8_44-44,5	1028	569
6924E_macr_fRVMA8_46,5-47	1075	600
6925E_macr_fRVMA8_46,5-47	1036	568
6929E_macr_fRVMA8_47-47,5	1027	567
6935E_macr_fRVMA8_48,5-49	1056	590
2-7-Rf-macro_20080219_784	1010	571
2.5-7-Rf-macro_20080219_791	1051	583

Mendeley Data <https://data.mendeley.com/datasets/nvs5xhcr63/2>

Cyprideis mataschensis , locality Mataschen

TPS.file in Mendeley Data	Length [µm]	Height [µm]
6760E_cfobesa_fRVMA8_29-29,5	925	512
6761E_cfobesa_fRVMA8_29-29,5	916	516
6762E_cfobesa_fRVMA8_29-29,5	900	505
6885E_cfobesa_RVMA7_1,5-2	858	480
6886E_cfobesa_RVMA7_1,5-2	882	477
6887E_cfobesa_RVMA7_1,5-2	905	498
6888E_cfobesa_RVMA7_1,5-2	904	499
6889E_cfobesa_RVMA7_1,5-2	868	473
6891E_cfobesa_fRVMA7_22-22,5	906	502
6892E_cfobesa_fRVMA7_22-22,5	881	488
6895E_cfobesa_fRVMA7_23-23,5	910	507
6896E_cfobesa_fRVMA7_23-23,5	880	498
6897E_cfobesa_fRVMA7_23-23,5	892	499
6898E_cfobesa_fRVMA7_23-23,5	847	479
6903E_cfobesa_fRVMA7_27-27,5	937	530
6904E_cfobesa_fRVMA7_27-27,5	873	491
6908E_cfobesa_fRVMA7_28,5-29	912	515
6909E_cfobesa_fRVMA7_28,5-29	913	485
6911E_cfobesa_fRVMA8_28,5-29	931	505
6914E_cfobesa_fRVMA8_30,5-31	904	512
6915E_cfobesa_fRVMA8_30,5-31	905	505
6917E_cfobesa_fRVMA8_33,5-34	879	497
6920E_cfobesa_fRVMA8_36,5-37	877	487
6923E_cfobesa_fRVMA8_44-44,5	918	507
6926E_cfobesa_fRVMA8_46,5-47	920	516
6927E_cfobesa_fRVMA8_46,5-47	887	489
6928E_cfobesa_fRVMA8_46,5-47	880	495
6930E_cfobesa_fRVMA8_47-47,5	891	493
6931E_cfobesa_fRVMA8_47-47,5	907	504
6932E_cfobesa_fRVMA8_47-47,5	894	496
6934E_cfobesa_fRVMA8_48-48,5	895	493
6936E_cfobesa_fRVMA8_48,5-49	878	471
6954E_cfobesa_fRVMA8_25.5-26	903	502
6955E_cfobesa_fRVMA8_24.5-25	894	493
6956E_cfobesa_fRVMA8_23-23.5	889	487
6957E_cfobesa_fRVMA8_22-22.5	896	488
6958E_cfobesa_fRVMA8_20.5-21	875	500
6959E_cfobesa_fRVMA8_20.5-21	925	504
6960E_cfobesa_fRVMA8_20.5-21	916	508
6961E_cfobesa_fRVMA8_19-19.5	922	508
6962E_cfobesa_fRVMA8_19-19.5	890	501
6964E_cfobesa_fRVMA8_16.5-17	899	498
6966E_cfobesa_fRVMA8_16.5-17	949	513
6967E_cfobesa_fRVMA8_18.5-19	936	518
6968E_cfobesa_fRVMA8_18-18.5	895	507
6969E_cfobesa_fRVMA8_17.5-18	918	504
6971E_cfobesa_fRVMA8_15-15.5	882	493
6972E_cfobesa_fRVMA8_15-15.5	943	534
6974E_cfobesa_fRVMA8_13-13.5	940	518
6975E_cfobesa_fRVMA8_12.5-13	858	476
6976E_cfobesa_fRVMA8_12-12.5	887	490
6977E_cfobesa_fRVMA8_12-12.5	904	501

6978E_cfobesa_fRVMA8_11.5-12	857	476
6979E_cfobesa_fRVMA8_11-11.5	885	494
6980E_cfobesa_fRVMA8_10-10.5	915	513
6981E_cfobesa_fRVMA8_9-9.5	904	494
6984E_cfobesa_fRVMA8_8.5-9	926	504
6985E_cfobesa_fRVMA8_8-8.5	880	494
6986E_cfobesa_fRVMA8_7-7.5	896	501
6987E_cfobesa_fRVMA8_6-6.5	904	490
6988E_cfobesa_fRVMA8_4.5-5	915	503
6989E_cfobesa_fRVMA8_4.5-5	912	504
6990E_cfobesa_fRVMA8_4-4.5	909	500
6991E_cfobesa_fRVMA8_3.5-4	909	499
6992E_cfobesa_fRVMA8_3.5-4	896	497
6993E_cfobesa_fRVMA8_2.5-3	935	506
6994E_cfobesa_fRVMA8_2.5-3	873	482
6995E_cfobesa_fRVMA8_1.5-2	880	483

Mendeley Data <https://data.mendeley.com/datasets/nvs5xhcr63/2>

Cyprideis pannonica , locality Sankt Margarethen

TPS.file in Mendeley Data		Length [μm]	Height [μm]
5147	EfRVSanktMargarethen 2-1	913	518
5148	EfRVSanktMargarethen 2-2	911	517
5149	EfRVSanktMargarethen 2-3	971	543
5150	EfRVSanktMargarethen 2-4	939	538
5151	EfRVSanktMargarethen 2-5	999	561
5152	EfRVSanktMargarethen 2-6	917	530
5153	EfRVSanktMargarethen 2-7	950	540
5154	EfRVSanktMargarethen 2-8	939	526
5155	EfRVSanktMargarethen 2-9	928	518
5156	EfRVSanktMargarethen 2-10	986	544
5157	EfRVSanktMargarethen 2-11	978	549
5158	EfRVSanktMargarethen 2-12	900	502
5159	EfRVSanktMargarethen 2-13	863	480
5160	EfRVSanktMargarethen 2-14	917	530
5161	EfRVSanktMargarethen 2-15	892	504
5162	EfRVSanktMargarethen 2-16	993	563
5163	EfRVSanktMargarethen 2-17	951	527
5164	EfRVSanktMargarethen 2-18	961	534
5165	EfRVSanktMargarethen 2-19	1014	561
5166	EfRVSanktMargarethen 2-20	981	562
5167	EfRVSanktMargarethen 2-21	964	541
5168	EfRVSanktMargarethen 2-22	953	541
5169	EfRVSanktMargarethen 2-23	953	529
5170	EfRVSanktMargarethen 2-24	919	519
5171	EfRVSanktMargarethen 2-25	957	554
5172	EfRVSanktMargarethen 2-26	892	503
5173	EfRVSanktMargarethen 2-27	985	559
5174	EfRVSanktMargarethen 2-28	955	540
5175	EfRVSanktMargarethen 2-29	971	539
5176	EfRVSanktMargarethen 2-30	934	538

Mendeley Data <https://data.mendeley.com/datasets/nvs5xhcr63/2>

Cyprideis pannonica , locality Skalica

TPS.file in Mendeley		Length [μm]	Height [μm]
	Data		
E_RV	1 SKAL17	780	433
E_RV	2 SKAL17	771	429
E_RV	3 SKAL17	866	477
E_RV	4 SKAL17	909	518
E_RV	5 SKAL17	824	455
E_RV	6 SKAL17	826	450
E_RV	7 SKAL17	791	448
E_RV	8 SKAL17	750	414
E_RV	9 SKAL17	835	463
E_RV	10 SKAL17	809	455
E_RV	11 SKAL17	779	438
E_RV	12 SKAL17	811	477
E_RV	13 SKAL17	786	442
E_RV	14 SKAL17	839	480
E_RV	15 SKAL17	771	425
E_RV	16 SKAL17	799	443
E_RV	17 SKAL17	812	456
E_RV	18 SKAL17	858	480
E_RV	20 SKAL17	760	430
E_RV	21 SKAL17	773	430
E_RV	23 SKAL17	796	434
E_RV	24 SKAL17	813	458
E_RV	25 SKAL17	833	469
E_RV	26 SKAL17	809	447
E_RV	27 SKAL17	848	484
E_RV	28 SKAL17	789	440
E_RV	30 SKAL17	820	449
E_RV	31 SKAL17	801	446
E_RV	32 SKAL17	754	406

Mendeley Data <https://data.mendeley.com/datasets/nvs5xhcr63/2>

Table S4 ANOSIM Pairwise test among *Cyprideis* species.

R Statistic	<i>kapfensteinensis</i>	<i>obesa</i> GB	<i>sublittoralis</i>	<i>pannonica</i> PE	<i>alberti</i>	<i>seminulum</i>	<i>heterostigma</i>	<i>pannonica</i> SM	<i>Cyprideis</i> sp. 2	<i>aff. obesa</i>	<i>Cyprideis</i> sp. 1	<i>tuberculata</i>	<i>mataschensis</i>	<i>pannonica</i> SKA	<i>obesa</i> HE
<i>obesa</i> GB	0.777														
<i>sublittoralis</i>	0.205	0.425													
<i>pannonica</i> PE	0.704	0.728	0.516												
<i>alberti</i>	0.957	0.913	0.730	0.799											
<i>seminulum</i>	0.985	0.977	0.835	0.987	0.909										
<i>heterostigma</i>	0.949	0.933	0.716	0.890	0.685	0.253									
<i>pannonica</i> SM	0.817	0.965	0.747	0.397	0.896	0.990	0.931								
<i>Cyprideis</i> sp. 2	0.705	0.974	0.733	0.749	0.943	0.981	0.941	0.603							
<i>aff. obesa</i>	0.492	0.646	0.327	0.746	0.715	0.520	0.443	0.843	0.718						
<i>Cyprideis</i> sp. 1	0.766	0.930	0.418	0.947	0.991	0.872	0.747	0.943	0.863	0.352					
<i>tuberculata</i>	0.452	0.876	0.441	0.568	0.809	0.875	0.776	0.471	0.38	0.617	0.373				
<i>mataschensis</i>	0.302	0.893	0.541	0.795	0.911	0.948	0.898	0.833	0.537	0.521	0.583	0.41			
<i>pannonica</i> SKA	0.651	0.911	0.555	0.567	0.929	0.958	0.843	0.6	0.422	0.544	0.754	0.296	0.543		
<i>obesa</i> HE	0.676	0.667	0.246	0.895	0.947	0.835	0.741	0.966	0.917	0.052	0.622	0.737	0.678	0.802	
<i>macrostigma</i>	0.329	0.872	0.327	0.673	0.946	0.978	0.906	0.792	0.403	0.378	0.826	0.395	0.23	0.367	0.698

[illegible]