

Supplementary Materials:

DNA Barcoding versus Morphological Variability of *Pterostichus brevicornis brevicornis* (Kirby, 1837) (Coleoptera, Carabidae) in the Arctic and Subarctic

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Table S1. List of sequenced specimens of *Pterostichus b. brevicornis* and *Pterostichus nivalis*, including the location with BOLD and NCBI's GenBank accession numbers.

Species	COI Haplotype Code	GenBank / BOLD IDS acc. no. (COI)	GenBank / BOLD IDS acc. no. (28S rRNA)	Locality	Data Source*
<i>Pterostichus brevicornis brevicornis</i> (Kirby, 1837)	Hapl1	MN673460.1 ACHAR803-18	n/a	Canada, Nunavut	Pentinsaari, 2020
<i>P. b. brevicornis</i>	Hapl1	MN670020.1 ACHAR781-18	n/a	Canada, Nunavut	Pentinsaari, 2020
<i>P. b. brevicornis</i>	Hapl1	MN679965.1 ACHAR828-18	n/a	Canada, Nunavut	Pentinsaari, 2020
<i>P. b. brevicornis</i>	Hapl1	HQ961899.1 JSYKA240-10	n/a	Canada, Yukon, Firth River	GenBank BOLD IDS
<i>P. b. brevicornis</i>	Hapl1	HQ961900.1 JSYKA241-10	n/a	Canada, Yukon, Firth River	GenBank BOLD IDS
<i>P. b. brevicornis</i>	Hapl1	MN672408.1 ACHAR877-18	n/a	Canada, Nunavut	Pentinsaari, 2020
<i>P. b. brevicornis</i>	Hapl6	ACHAR876-18	n/a	Canada, Nunavut	BOLD IDS
<i>P. b. brevicornis</i>	Hapl6	MN670684.1 ACHAR868-18	n/a	Canada, Nunavut	Pentinsaari, 2020
<i>P. b. brevicornis</i>	Hapl8	FCHAR1280	n/a	Canada, Nunavut	GenBank
<i>P. b. brevicornis</i>	Hapl8	FCHAR2131	n/a	Canada, Nunavut	BOLD IDS
<i>P. b. brevicornis</i>	Hapl8	FCHAR6620	n/a	Canada, Nunavut	GenBank
<i>P. b. brevicornis</i>	Hapl8	FCHAR7057	n/a	Canada, Nunavut	BOLD IDS
<i>P. b. brevicornis</i>	Hapl8	FCHAR7369	n/a	Canada, Nunavut	GenBank
<i>P. b. brevicornis</i>	Hapl13	FCHAR7721	n/a	Canada, Nunavut	BOLD IDS
<i>P. b. brevicornis</i>	Hapl8	FCHAR1303	n/a	Canada, Nunavut	GenBank
<i>P. b. brevicornis</i>	Hapl8	FCHAR1618	n/a	Canada, Nunavut	BOLD IDS
<i>P. b. brevicornis</i>	Hapl8	FCHAR2132	n/a	Canada, Nunavut	GenBank
<i>P. b. brevicornis</i>	Hapl8	FCHAR5467	n/a	Canada, Nunavut	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	JSYKA235-10	n/a	Canada, Yukon, Firth River	GenBank BOLD IDS
<i>P. b. brevicornis</i>	Hapl6	HQ961895.1 JSYKA236-10	n/a	Canada, Yukon, Firth River	GenBank BOLD IDS
<i>P. b. brevicornis</i>	Hapl7	HQ961896.1 JSYKA237-10	n/a	Canada, Yukon, Firth River	GenBank BOLD IDS
<i>P. b. brevicornis</i>	Hapl8	HQ961897.1 JSYKA238-10	n/a	Canada, Yukon, Firth River	GenBank BOLD IDS
<i>P. b. brevicornis</i>	Hapl8	HQ961898.1 JSYKA239-10	n/a	Canada, Yukon, Firth River	GenBank BOLD IDS
<i>P. b. brevicornis</i>	Hapl4	KJ204113.1 HMCOC006-07	n/a	Canada, Manitoba, Churchill	Woodcock, 2013

<i>P. b. brevicornis</i>	Hapl4	KJ203181.1 HMCOC510-09	n/a	Canada, Manitoba, Churchill	Woodcock, 2013
<i>P. b. brevicornis</i>	Hapl4	KJ203639.1 HMCOC627-09	n/a	Canada, Manitoba, Churchill	Woodcock, 2013
<i>P. b. brevicornis</i>	Hapl4	KJ203239.1 MZCHU103-07	n/a	Canada, Manitoba, Churchill	Woodcock, 2013
<i>P. b. brevicornis</i>	Hapl4	KJ203875.1 MZCHU107-07	n/a	Canada, Manitoba, Churchill	Woodcock, 2013
<i>P. b. brevicornis</i>	Hapl4	KJ204094.1 MZCHU111-07	n/a	Canada, Manitoba, Churchill	Woodcock, 2013
<i>P. b. brevicornis</i>	Hapl4	JN310764.1 TWCOL664-10	n/a	Canada, Manitoba, Churchill	GenBank BOLD IDS
<i>P. b. brevicornis</i>	Hapl4	KJ203437.1 DSCOL501-07	n/a	Canada, Manitoba, Churchill	Woodcock, 2013
<i>P. b. brevicornis</i>	Hapl4	KJ203343.1 HMCOC242-07	n/a	Canada, Manitoba, Churchill	Woodcock, 2013
<i>P. b. brevicornis</i>	Hapl4	KJ204090.1 HMCOC259-07	n/a	Canada, Manitoba, Churchill	Woodcock, 2013
<i>P. b. brevicornis</i>	Hapl4	KJ203213.1 HMCOC631-09	n/a	Canada, Manitoba, Churchill	Woodcock, 2013
<i>P. b. brevicornis</i>	Hapl4	KJ203822.1 HMCOC632-09	n/a	Canada, Manitoba, Churchill	Woodcock, 2013
<i>P. b. brevicornis</i>	Hapl4	KJ204238.1 HMCOC629-09	n/a	Canada, Manitoba, Churchill	GenBank BOLD IDS
<i>P. b. brevicornis</i>	Hapl4	HQ582357.1 TWCOL385-10	n/a	Canada, Manitoba	GenBank BOLD IDS
<i>P. b. brevicornis</i>	Hapl5	KJ203657.1 HMCOL237-09	n/a	Canada, Manitoba, Churchill	Woodcock, 2013
<i>P. b. brevicornis</i>	Hapl9	KU876036.1 UAMIC364-13	n/a	USA, Alaska, Talkeetna	Sikes, 2017
<i>P. b. brevicornis</i>	Hapl2	BETN4365-19	n/a	USA, Alaska, Fairbanks Bor- ough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN4479-19	n/a	USA, Alaska, Fairbanks Bor- ough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN4485-19	n/a	USA, Alaska, Fairbanks Bor- ough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN4487-19	n/a	USA, Alaska, Fairbanks Bor- ough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN4497-19	n/a	USA, Alaska, Fairbanks Bor- ough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN4506-19	n/a	USA, Alaska, Fairbanks Bor- ough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN647-18	n/a	USA, Alaska, Fairbanks Bor- ough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN4477-19	n/a	USA, Alaska, Fairbanks Bor- ough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN4488-19	n/a	USA, Alaska, Fairbanks Bor- ough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN4361-19	n/a	USA, Alaska, Fairbanks Bor- ough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN4480-19	n/a	USA, Alaska, Fairbanks Bor- ough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN4483-19	n/a	USA, Alaska, Fairbanks Bor- ough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN4484-19	n/a	USA, Alaska, Fairbanks Bor- ough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN4500-19	n/a	USA, Alaska, Fairbanks Bor- ough	BOLD IDS

<i>P. b. brevicornis</i>	Hapl2	BETN646-18	n/a	USA, Alaska, Fairbanks Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN7632-20	n/a	USA, Alaska, Fairbanks Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl3	BETN4478-19	n/a	USA, Alaska, Fairbanks Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl3	BETN4493-19	n/a	USA, Alaska, Fairbanks Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl3	BETN4333-19	n/a	USA, Alaska, Fairbanks Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl3	BETN4372-19	n/a	USA, Alaska, Fairbanks Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl3	BETN4489-19	n/a	USA, Alaska, Fairbanks Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl3	BETN4490-19	n/a	USA, Alaska, Fairbanks Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl3	BETN4319-19	n/a	USA, Alaska, Fairbanks Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl3	BETN4495-19	n/a	USA, Alaska, Fairbanks Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl3	BETN4496-19	n/a	USA, Alaska, Fairbanks Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl3	BETN4318-19	n/a	USA, Alaska, Fairbanks Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl3	BETN4321-19	n/a	USA, Alaska, Fairbanks Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl3	BETN4327-19	n/a	USA, Alaska, Fairbanks Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl3	BETN4481-19	n/a	USA, Alaska, Fairbanks Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl14	BETN7631-20	n/a	USA, Alaska, Fairbanks Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl15	BETN7637-20	n/a	USA, Alaska, Fairbanks Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl12	BETN7640-20	n/a	USA, Alaska, Fairbanks Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl3	BETN7627-20	n/a	USA, Alaska, Southeast Fairbanks	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN7619-20	n/a	USA, Alaska, Southeast Fairbanks	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN4409-19	n/a	USA, Alaska, Denali Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN4428-19	n/a	USA, Alaska, Denali Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN4455-19	n/a	USA, Alaska, Denali Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN4429-19	n/a	USA, Alaska, Denali Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN4431-19	n/a	USA, Alaska, Denali Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN4470-19	n/a	USA, Alaska, Denali Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN609-18	n/a	USA, Alaska, Denali Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN4458-19	n/a	USA, Alaska, Denali Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN568-18	n/a	USA, Alaska, Denali Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN612-18	n/a	USA, Alaska, Denali Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN4420-19	n/a	USA, Alaska, Denali Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN579-18	n/a	USA, Alaska, Denali Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl2	BETN636-18	n/a	USA, Alaska, Denali Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl3	BETN4433-19	n/a	USA, Alaska, Denali Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl11	BETN623-18	n/a	USA, Alaska, Denali Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl12	BETN633-18	n/a	USA, Alaska, Denali Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl10	BETN4423-19	n/a	USA, Alaska, Denali Borough	BOLD IDS
<i>P. b. brevicornis</i>	Hapl10	BETN4254-19	n/a	USA, Alaska, Toolik	BOLD IDS

<i>P. b. brevicornis</i>	Hapl10	BETN4261-19	n/a	USA, Alaska, Toolik	BOLD IDS
<i>P. b. brevicornis</i>	Hapl1	BETN4256-19	n/a	USA, Alaska, Toolik	BOLD IDS
<i>P. b. brevicornis</i>	Hapl10	MT792007	MZ366473	Russia, Chukotka, Pevek	Present study
<i>P. b. brevicornis</i>	Hapl18	MT792008	n/a	Russia, Chukotka, Pevek	Present study
<i>P. b. brevicornis</i>	Hapl18	MT792009	MZ366474	Russia, Chukotka, Pevek	Present study
<i>P. b. brevicornis</i>	Hapl10	MT792010	MT791964	Russia, Chukotka, Apapelgino	Present study
<i>P. b. brevicornis</i>	Hapl10	MT792011	n/a	Russia, Chukotka, Apapelgino	Present study
<i>P. b. brevicornis</i>	Hapl10	MT792012	n/a	Russia, Chukotka, Alkatvaam	Present study
<i>P. b. brevicornis</i>	Hapl10	MT792013	n/a	Russia, Chukotka, Alkatvaam	Present study
<i>P. b. brevicornis</i>	Hapl10	MT792014	n/a	Russia, Chukotka, Alkatvaam	Present study
<i>P. b. brevicornis</i>	Hapl21	MT792015	n/a	Russia, Chukotka, Alkatvaam	Present study
<i>P. b. brevicornis</i>	Hapl10	MT792016	n/a	Russia, Chukotka, Alkatvaam	Present study
<i>P. b. brevicornis</i>	Hapl10	MT792017	MT791965	Russia, Chukotka, Hatyrka	Present study
<i>P. b. brevicornis</i>	Hapl10	MT792018	MT791966	Russia, Chukotka, Hatyrka	Present study
<i>P. b. brevicornis</i>	Hapl10	MT792019	n/a	Russia, Chukotka, Hatyrka	Present study
<i>P. b. brevicornis</i>	Hapl10	MT792020	n/a	Russia, Chukotka, Hatyrka	Present study
<i>P. b. brevicornis</i>	Hapl10	MT792021	MT791967	Russia, Chukotka, Amguema	Present study
<i>P. b. brevicornis</i>	Hapl10	MT792022	MT791968	Russia, Chukotka, Amguema	Present study
<i>P. b. brevicornis</i>	Hapl10	MT792023	MT791969	Russia, Chukotka, Meynipilgino	Present study
<i>P. b. brevicornis</i>	Hapl10	MZ351277	n/a	Russia, Chukotka, Kosa Belyaka	Present study
<i>P. b. brevicornis</i>	Hapl10	MZ351278	n/a	Russia, Chukotka, Kosa Belyaka	Present study
<i>P. b. brevicornis</i>	Hapl10	MT792024	MT791970	Russia, Wrangel Island, Somnitelnaya Bay	Present study
<i>P. b. brevicornis</i>	Hapl20	MT792025	MT791971	Russia, Wrangel Island, Somnitelnie mountains	Present study
<i>P. b. brevicornis</i>	Hapl20	MZ351285	n/a	Russia, Wrangel Island, Somnitelnie mountain	Present study
<i>P. b. brevicornis</i>	Hapl6	MZ351282	n/a	Russia, Wrangel Island, Somnitelnie mountains	Present study
<i>P. b. brevicornis</i>	Hapl10	MT792026	MT791972	Russia, Wrangel Island, Mineevea mountains	Present study
<i>P. b. brevicornis</i>	Hapl10	MT792027	n/a	Russia, Wrangel Island, Mineevea mountains	Present study
<i>P. b. brevicornis</i>	Hapl18	MT792028	MT791973	Russia, Taymyr area, Kotuy	Present study
<i>P. b. brevicornis</i>	Hapl18	MT792029	MT791974	Russia, Taymyr area, Kotuy	Present study
<i>P. b. brevicornis</i>	Hapl10	MT792030	n/a	Russia, Taymyr Peninsula, Ary-Mas	Present study
<i>P. b. brevicornis</i>	Hapl10	MT792031	MT791975	Russia, Taymyr Peninsula, Ary-Mas	Present study
<i>P. b. brevicornis</i>	Hapl18	MT792032	n/a	Russia, Taymyr Peninsula, Ary-Mas	Present study
<i>P. b. brevicornis</i>	Hapl18	MT792033	n/a	Russia, Taymyr Peninsula, Ary-Mas	Present study
<i>P. b. brevicornis</i>	Hapl18	MT792034	n/a	Russia, Taymyr Peninsula, Ary-Mas	Present study
<i>P. b. brevicornis</i>	Hapl18	MT792035	n/a	Russia, Taymyr area, Kotuy	Present study
<i>P. b. brevicornis</i>	Hapl18	MT792036	n/a	Russia, Taymyr Peninsula, Kotuy	Present study
<i>P. b. brevicornis</i>	Hapl18	MT792037	n/a	Russia, Taymyr Peninsula, Kotuy	Present study
<i>P. b. brevicornis</i>	Hapl15	MT792038	MT791976	Russia, Polar Ural, Harp	Present study
<i>P. b. brevicornis</i>	Hapl15	MT792039	MT791977	Russia, Polar Ural, Harp	Present study
<i>P. b. brevicornis</i>	Hapl15	MT792040	MT791978	Russia, Polar Ural, Harp	Present study
<i>P. b. brevicornis</i>	Hapl15	MT792041	MZ366462	Russia, Polar Ural, Harp	Present study
<i>P. b. brevicornis</i>	Hapl15	MT792042	n/a	Russia, Polar Ural, Harp	Present study

<i>P. b. brevicornis</i>	Hapl15	MT792043	n/a	Russia, Tazovsky Peninsula, Messoyaha	Present study
<i>P. b. brevicornis</i>	Hapl15	MT792044	MT791979	Russia, Tazovsky Peninsula, Messoyaha	Present study
<i>P. b. brevicornis</i>	Hapl15	MT792045	MT791980	Russia, Tazovsky Peninsula, Messoyaha	Present study
<i>P. b. brevicornis</i>	Hapl18	MT792046	n/a	Russia, Tazovsky Peninsula, Messoyaha	Present study
<i>P. b. brevicornis</i>	Hapl16	MT792047	MT791981	Russia, Vaigach Island, Bolvansky Nos	Present study
<i>P. b. brevicornis</i>	Hapl16	MT792048	MT791982	Russia, Vaigach Island, Bolvansky Nos	Present study
<i>P. b. brevicornis</i>	Hapl16	MZ351267	n/a	Russia, Vaigach Island, Bolvansky Nos	Present study
<i>P. b. brevicornis</i>	Hapl17	MZ351259	n/a	Russia, Vaigach Island, Bolvansky Nos	Present study
<i>P. b. brevicornis</i>	Hapl17	MZ351260	MZ366463	Russia, Vaigach Island, Bolvansky Nos	Present study
<i>P. b. brevicornis</i>	Hapl17	MZ351261	MZ366464	Russia, Vaigach Island, Bolvansky Nos	Present study
<i>P. b. brevicornis</i>	Hapl17	MZ351262	n/a	Russia, Vaigach Island, Bolvansky Nos	Present study
<i>P. b. brevicornis</i>	Hapl17	MZ351263	n/a	Russia, Vaigach Island, Bolvansky Nos	Present study
<i>P. b. brevicornis</i>	Hapl17	MZ351264	n/a	Russia, Vaigach Island, Bolvansky Nos	Present study
<i>P. b. brevicornis</i>	Hapl17	MZ351265	n/a	Russia, Vaigach Island, Bolvansky Nos	Present study
<i>P. b. brevicornis</i>	Hapl17	MZ351266	n/a	Russia, Vaigach Island, Bolvansky Nos	Present study
<i>P. b. brevicornis</i>	Hapl17	MZ351267	n/a	Russia, Vaigach Island, Bolvansky Nos	Present study
<i>P. b. brevicornis</i>	Hapl19	MT792049	MZ366465	Russia, Ygorsky Peninsula, Amderma	Present study
<i>P. b. brevicornis</i>	Hapl16	MT792050	MZ366466	Russia, Ygorsky Peninsula, Amderma	Present study
<i>P. b. brevicornis</i>	Hapl10	MT792051	n/a	Russia, Ygorsky Peninsula, Amderma	Present study
<i>P. b. brevicornis</i>	Hapl16	MT792052	MT791983	Russia, Ygorsky Peninsula, Amderma	Present study
<i>P. b. brevicornis</i>	Hapl16	MZ351269	MZ366467	Russia, Ygorsky Peninsula, Amderma	Present study
<i>P. b. brevicornis</i>	Hapl16	MZ351270	MZ366468	Russia, Ygorsky Peninsula, Beliy Nos	Present study
<i>P. b. brevicornis</i>	Hapl16	MT792053	n/a	Russia, Pinega reserve	Present study
<i>P. b. brevicornis</i>	Hapl16	MT792054	MT791984	Russia, Pinega reserve	Present study
<i>P. b. brevicornis</i>	Hapl16	MT792055	MT791985	Russia, Pinega reserve	Present study
<i>P. b. brevicornis</i>	Hapl22	MT792056	MT791986	Russia, Kanin Peninsula, Shoina	Present study
<i>P. b. brevicornis</i>	Hapl17	MT792057	MT791987	Russia, Kanin Peninsula, Shoina	Present study
<i>P. b. brevicornis</i>	Hapl22	MT792058	n/a	Russia, Kanin Peninsula, Shoina	Present study
<i>P. b. brevicornis</i>	Hapl22	MT792059	n/a	Russia, Kanin Peninsula, Shoina	Present study
<i>P. b. brevicornis</i>	Hapl22	MT792060	n/a	Russia, Kanin Peninsula, Shoina	Present study

<i>P. b. brevicornis</i>	Hapl17	MT792061	n/a	Russia, Kanin Peninsula, Shoina	Present study
<i>P. b. brevicornis</i>	Hapl17	MT792062	n/a	Russia, Kanin Peninsula, Shoina	Present study
<i>P. b. brevicornis</i>	Hapl17	MT792063	n/a	Russia, Kanin Peninsula, Shoina	Present study
<i>P. b. brevicornis</i>	Hapl17	MT792064	n/a	Russia, Kanin Peninsula, Shoina	Present study
<i>P. b. brevicornis</i>	Hapl19	MT792065	n/a	Russia, Yamal Peninsula, Sey-akha	Present study
<i>P. b. brevicornis</i>	Hapl23	MT792066	n/a	Kamchatka, Karaginskiy Island	Present study
<i>P. b. brevicornis</i>	Hapl23	MZ351281	n/a	Kamchatka, Karaginskiy Island	Present study
<i>Out-group taxa</i>					
<i>Pterostichus nivalis</i> (R.F.Sahlberg, 1844)	-	MT792067	MT791988	Russia, Chukotka, Apapelgino	Present study
<i>P. nivalis</i>	-	MT792068	MT791989	Russia, Chukotka, Hatyrka	Present study
<i>P. nivalis</i>	-	MT792069	MT791990	Russia, Chukotka, Kosa Belyaka	Present study

Table S2. *Pterostichus brevicornis brevicornis* 28S rRNA polymorphism *.

Haplotype, Code	GenBank acc. no.	173	274	276	404	423	428	429	430	447	488
Hapl 1	MT791970, MT791967, MT791968, MT791969	T	C	T	G	T	G	A	A	C	-
Hapl 2	MT791965, MT791966	.	.	.	.	C	.	.	.	.	-
Hapl 3	MT791971, MT791972, MZ366473	.	.	.	.	.	T	T	-	T	T
Hapl 4	MT791973, MT791976, MT791977, MT791978, MZ366462, MT791981, MT791979, MT791980, MZ366465, MZ366466, MZ366467 MT791983, MZ366468	A	T	-	.	.	T	T	-	T	-
Hapl 5	MT791964	A	T	-	.	.	T	T	T	.	T
Hapl 6	MT791974, MT791975	A	T	-	A	.	T	T	-	T	-
Hapl 7	MT791982, MZ366463, MZ366464, MT791984 MT791985, MT791986, MT791987	A	T	-	.	.	T	T	-	.	-
Hapl 8	MZ366474	A	T	-	.	.	T	T	T	.	-

* - Numbers in the top row refer to nucleotide positions within a condensed alignment of the sequences, letters are FASTA codes for nucleotides but with additional polymorphisms shown explicitly. Dots indicate a nucleotide matching the first sequence. Dashes indicate gaps after alignment of the sequences.

Table S3. Sampling sites and sample size: total number of pronotum (males and females) and male genitalia (aedeagus) of *Pterostichus b. brevicornis*.

Locality	Site	Sampling year	Sample size		Aedeagus	Sequences
			Pronotum			
			male	female		
Ygorsky Peninsula	Amderma settlement (Am)	2012	3	3	4	COI, 28S rRNA
Kolguev Island	Bugrino settlement (Bug)	2009	3	3	3	n/a
Kanin Peninsula	Shoina settlement (Sho)	2019	5	4	4	COI, 28S rRNA
Pinega reserve	Golubino settlement (Pin)	2019	4	3	5	COI, 28S rRNA
Vaygach Island	Bolvansky Nos (Vay)	2013	8	3	8	COI, 28S rRNA
Kola Peninsula	Khibiny mountains (Khi)	2018	3	3	-	n/a
Polar Ural	Harp settlement (PU)	2017	6	3	6	COI, 28S rRNA
Yamal Peninsula	Syoyakha settlement (Yam)	2014	5	3	5	COI
Tazovsky Peninsula	Messoyaha River (Taz)	2008	4	3	4	COI, 28S rRNA
Taymyr Peninsula	Meduza Bay (MB)	2002	-	-	2	n/a
Taymyr area	Kotuy River (T.Kr)	2010	3	3	-	COI, 28S rRNA
Taymyr Peninsula	Maksimovka River (T.Mr)	2003	3	3	-	n/a
Taymyr Peninsula	Ladannah Lake (T.Lr)	2001	8	3	8	n/a
Taymyr Peninsula	Ary-Mas (AM)	2010	3	3	-	COI, 28S rRNA
Chukotka	Pevek settlement (Pev)	2011	3	3	-	COI
Chukotka	Apapelgino settlement (Ap)	2019	3	3	-	COI, 28S rRNA
Wrangel Island	Mineeva mountains (Wr)	2015	3	3	-	COI, 28S rRNA
Total			67	49	49	

n/a – not available.

Table S4. Contribution of significant principal components to shape variation of pronotum and aedeagus of *Pterostichus b. brevicornis*.

Components	Pronotum			Aedeagus		
	Eigenvalue	Proportion (%)	Cumulative (%)	Eigenvalue	Proportion (%)	Cumulative (%)
PC1	10.1×10 ⁵	51.10	51.10	41.0×10 ⁵	55.45	55.45
PC2	3.5×10 ⁵	17.76	68.86	9.2×10 ⁵	12.40	67.85
PC3	2.3×10 ⁵	11.66	80.52	8.1×10 ⁵	11.03	78.87
PC4	1.2×10 ⁵	5.86	86.38	4.2×10 ⁵	5.70	84.57
PC5	0.8×10 ⁵	3.85	90.22	2.5×10 ⁵	3.40	87.98

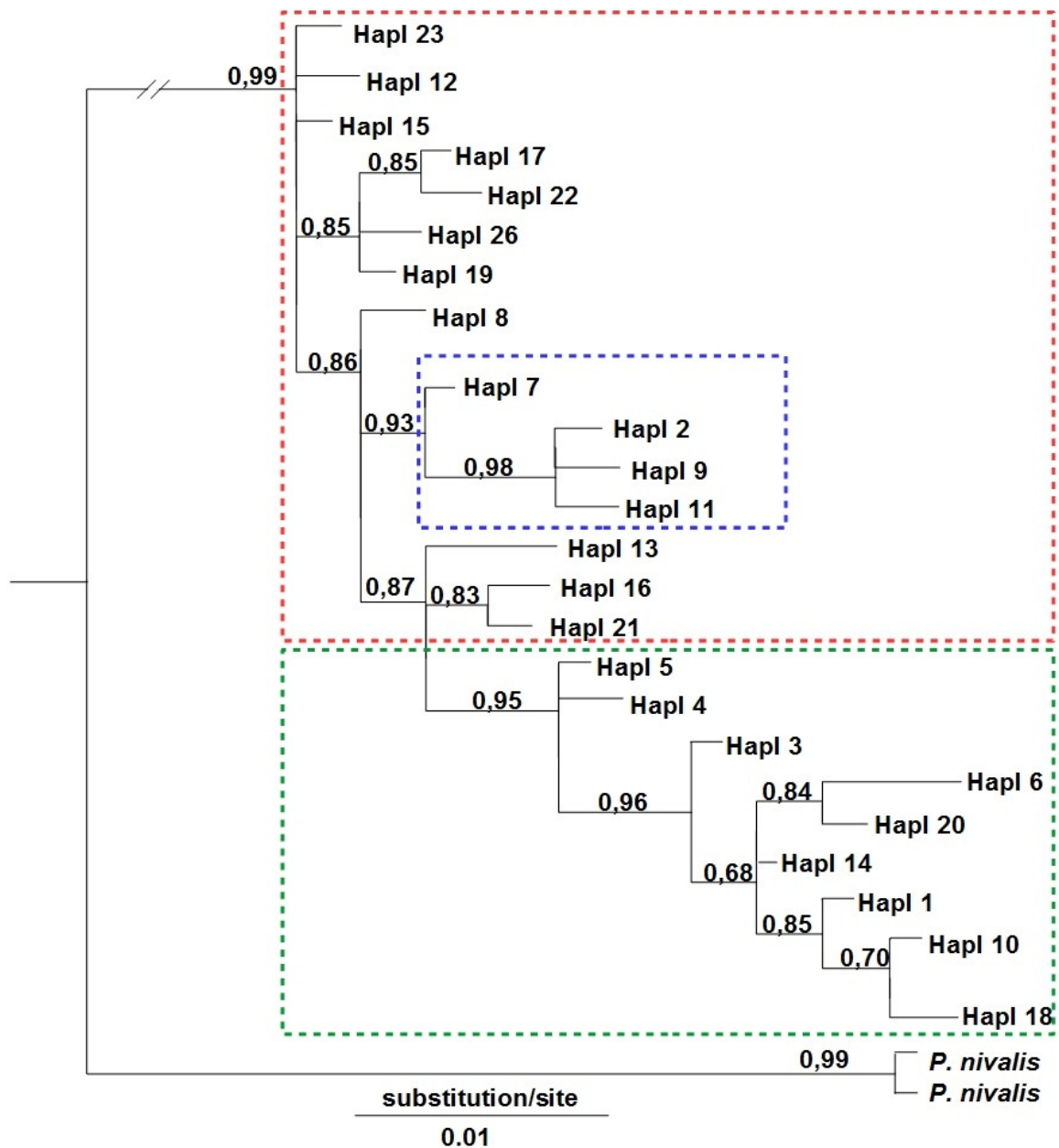


Figure S1. Phylogenetic tree of *Pterostichus brevicornis brevicornis* recovered from Bayesian inference analysis based on the COI sequence dataset. Haplotype codes are indicated in Table S1. The dashed rectangles corresponded to subclades of the majority-rule consensus phylogenetic tree (see Figure 2). Numbers near branches indicate the Bayesian posterior probability (BPP).