Table 1. Overview of ddRAD analyses. The ddRAD data was analyzed once including all individuals and once including only individuals assigned to lineages I_{RAD}-III_{RAD}

	All lineages	I_{RAD}-III_{RAD}
number of loci	1723	2993
total base pairs	290828	502577
number of SNPs	18999	21697
monomorphic base pairs	271829 (93.47%)	480880 (95.68%)
monomorphic loci	9 (0.52%)	79 (2.64%)

Table 2. COI pairwise uncorrected *p*-distances in percent.

	I_{COI}	II_{COI}	III_{COI}	IV_{COI}	V_{COI}
I_{COI}	0-1.77				
II_{COI}	1.61-2.64	0-0.19			
III_{COI}	2.64-3.47	3.21-3.82	0-0.38		
IV_{COI}	2.82-4.52	3.59-4.99	4.15-5.16	0-0.1.89	
V_{COI}	5.43-6.76	5.85-6.79	6.60-7.27	4.91-6.12	0-0.96

Table 3. Uncorrected *p*-distances of nuclear ddRAD loci in percent. Values are based on the analyses including all individuals.

	I_{RAD}	II_{RAD}	III_{RAD}	IV_{RAD}	V_{RAD}
I_{RAD}	0.08-0.17				
II_{RAD}	0.17-0.30	0.07-0.19			
III_{RAD}	0.15-0.26	0.22-0.33	0.09-0.20		
IV_{RAD}	0.72-0.89	0.77-0.91	0.71-0.89	0.11-0.16	
V_{RAD}	0.45-0.58	0.54-0.63	0.45-0.58	0.66-0.77	0.29-0.32

Table 4: Population genetic and demographic parameters for each station and lineage. Only stations for which at least five individuals for the respective marker system (COI or ddRAD) were available are included (with the exception for V_{RAD}, as here only three individuals were available). For the respective lineages, all available individuals were included; also those from stations not shown here (see also Supplementary Table 1). ddRAD statistics are based primarily on the data set that includes all individuals, statistics derived from the data set limited to *H. bicuspis* I-III are shown in parentheses.

*, the assignment of individuals to the respective lineages differs among markers (see also Supplementary Table 1)

| Station | COI | | | | | | | ddRAD | | | | | |
	lineage	# ind.	# hapl.	haplotype diversity (h)	nucleotide diversity (π)	Tajima's D (prob.)	Fu's Fs (prob.)	# ind.	lineage	nucleotide diversity (π)	obs. heterozygosity (all sites)	F_{IS}	Tajima's D
869	I_{COI}	13	2	0.15 +/- 0.13	0.00029 +/- 0.00049	-1.15 (0.14)	-0.54 (0.11)						
873	I_{COI}	34	5	0.22 +/- 0.09	0.00044 +/- 0.00059	-1.89 (0.01)	-4.67 (0)	9	I_{RAD}	0.0056 (0.0055)	0.0106 (0.0106)	0.12 (0.14)	-0.07 (-0.12)
879	I_{COI}	8	3	0.68 +/- 0.12	0.00274 +/- 0.00213	0.84 (0.79)	0.83 (0.65)						
880	I_{COI}	18	6	0.49 +/- 0.14	0.00085 +/- 0.00088	-1.85 (0.01)	-5.27 (0)						
881	I_{COI}	26	2	0.08 +/- 0.07	0 +/- 0	0.00 (1)	-	5	I_{RAD}	0.0060 (0.0059)	0.0106 (0.0106)	0.09 (0.13)	-0.07 (-0.09)
1159	I_{COI}	5	1	0.00 +/- 0.00	0 +/- 0	0.00 (1)	-						
1172	I_{COI}	12	2	0.17 +/- 0.13	0.00031 +/- 0.00051	-1.14 (0.17)	-0.48 (0.13)	5	II_{RAD}	0.0045 (0.0046)	0.0099 (0.0099)	0.08 (0.10)	0.07 (0.05)
1194	II_{COI}	9	1	0.00 +/- 0.00	0 +/- 0	0.00 (1)	-	5	II_{RAD}	0.0052 (0.0050)	0.0103 (0.0103)	0.08 (0.10)	0.02 (-0.01)
1123	III_{COI}	18	4	0.31 +/- 0.14	0.00063 +/- 0.00074	-1.71 (0.02)	-2.60 (0)	6	III_{RAD}	0.0055 (0.0054)	0.0113 (0.0113)	0.14 (0.16)	0.08 (0.10)
1136	III_{COI}	7	2	0.29 +/- 0.20	0.00055 +/- 0.00078	-1.01 (0.24)	-0.09 (0.23)						
1019	IV_{COI}	10	2	0.56 +/- 0.07	0.00943 +/- 0.00566	2.50 (1)	7.60 (1)	8	IV_{RAD}	0.0062	0.0111	0.12	0.03
83	V_{COI}	8	3	0.46 +/- 0.20	0.00094 +/- 0.00101	-1.31 (0.11)	-1.00 (0.06)						
1072	V_{COI}	18	9	0.84 +/- 0.06	0.00519 +/- 0.00323	-0.19 (0.44)	-2.42 (0.09)						
I_{COI}/I_{RAD}*		122	14	0.63 +/- 0.03	0.00240 +/- 0.00168	-1.72 (0.02)	-6.50 (0.01)	17		0.0059 (0.0059)	0.0106 (0.106)	0.13 (0.17)	-0.27 (-0.36)
II_{COI}/II_{RAD}*		12	2	0.16 +/- 0.13	0.00032 +/- 0.00051	-1.14 (0.20)	-0.48 (0.15)	13		0.0052 (0.0052)	0.0103 (0.103)	0.17 (0.20)	-0.19 (-0.25)
III_{COI}/III_{RAD}*		39	5	0.25 +/- 0.10	0.00050 +/- 0.00063	-1.89 (0)	-4.41 (0)	11		0.0059 (0.0059)	0.0107 (0.0107)	0.18 (0.22)	-0.13 (-0.16)
I_{COI}-III_{COI}/		164	21	0.77 +/- 0.02	0.01249 +/- 0.00656	-0.04 (0.57)	0.57 (0.65)	41		0.0065	0.0105	0.27	-0.59 (-

I_{RAD}-III_{RAD}									(0.0065)	(0.0105)	(0.30)	0.68)
IV_{COI}/IV_{RAD}	15	4	0.75 +/- 0.06	0.00897 +/- 0.00521	1.56 (0.96)	4.26 (0.95)	8		0.0062	0.0111	0.12	0.03
V_{COI}/V_{RAD}	32	13	0.84 +/- 0.05	0.00387 +/- 0.00248	-1.01 (0.16)	-6.39 (0)	3		0.0097	0.0113	0.18	0.00

Table 5: Pairwise population differentiation based on F_{ST}. COI based F_{ST} values above and ddRAD based values below the diagonal. Only populations with at least five individuals available for the respective marker (COI, ddRAD) are included.

		I						II	III		IV	V	
		873	879	880	881	1159	1172	1194	1123	1136	1019	83	1072
I	869	-0.03	0.73**	0.72**	0.94**	0.98**	0.84**	0.99**	0.98**	0.99**	0.90**	0.99**	0.95**
	873		0.78**	0.75**	0.88**	0.97**	0.81**	0.98**	0.98**	0.98**	0.94**	0.99**	0.97**
	879			0.29**	0.58**	0.92**	0.35**	0.96**	0.97**	0.96**	0.86**	0.98**	0.93**
	880				0.02	0.94**	-0.01	0.97**	0.97**	0.97**	0.91**	0.99**	0.95**
	881	0.03				1**	0.07	1**	0.99**	1**	0.94**	1**	0.96**
	1159						0.98**	1**	0.98**	0.99	0.86**	0.99**	0.93**
	1172	0.25			0.22			0.99**	0.98**	0.99**	0.89**	0.99**	0.95**
II	1194	0.21			0.17		0.13		0.99**	0.99**	0.89**	0.99**	0.94**
III	1123	0.17			0.15		0.29	0.25		-0.01	0.92**	0.99**	0.96**
	1136										0.89**	0.99**	0.94**
IV	1019											0.90**	0.88**
V	83												0.22