Table S1. *Genetic identity (l) estimated from the gene arrangement frequencies among the natural populations of* D. ananassae

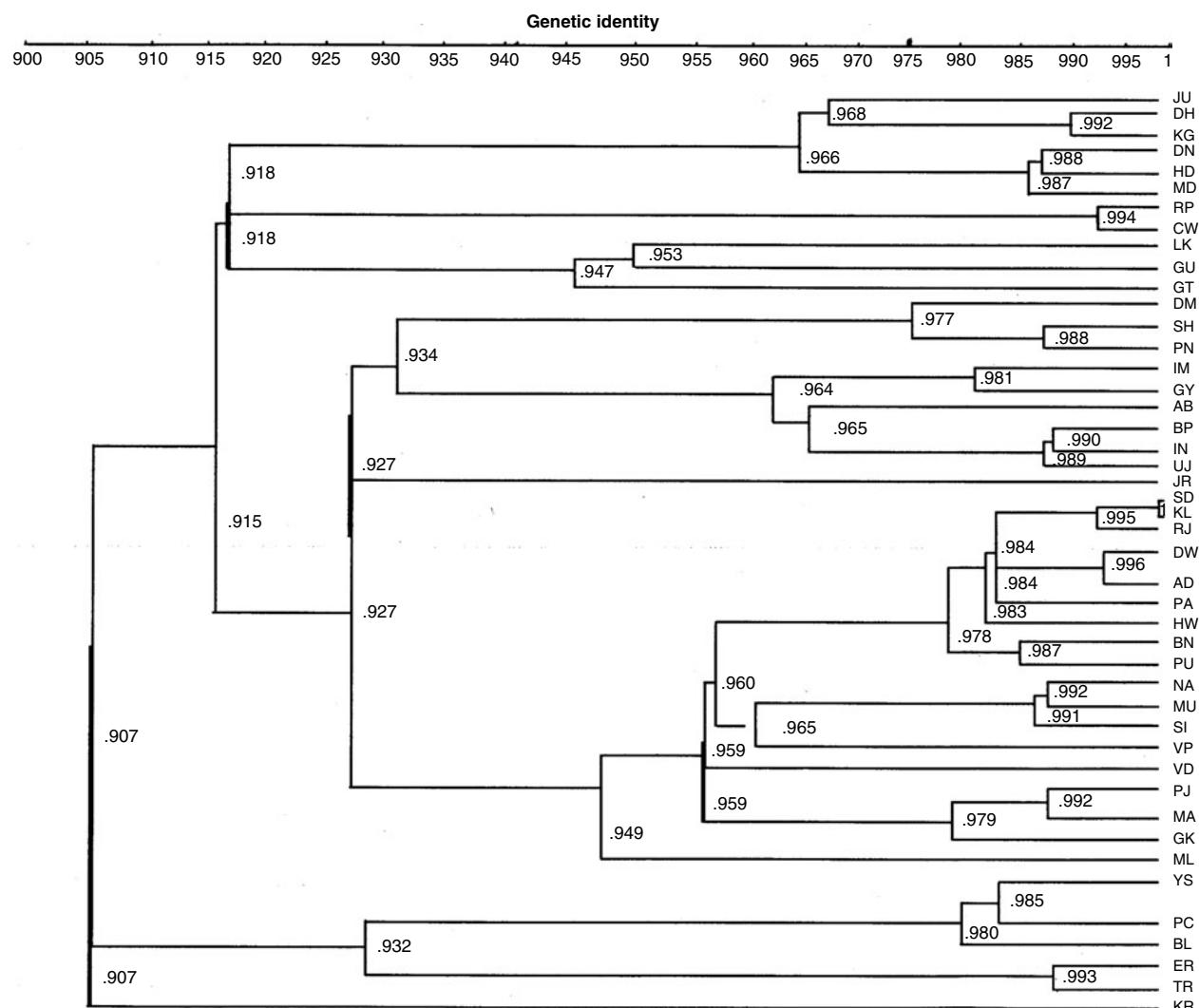|	JU	DH	KG	DN	HD	MD	GT	LK	GU	RP	CW	DM	SH	PN	AB	IM	GY	UJ	BP	IN	JR	HW	SD	KL	RJ	DW	AD	PA	BN	PU	SI	NA	MU	VP	VD	PJ	MA	GK	ML	BL	YS	PC	ER	TR	KR
JU		0.978	0.958	0.869	0.962	0.975	0.881	0.983	0.911	0.839	0.99	0.935	0.908	0.919	0.998	0.961	0.921	0.982	0.988	0.972	0.951	0.971	0.92	0.959	0.968	0.938	0.928	0.974	0.934	0.949	0.963	0.984	0.962	0.99	0.927	0.904	0.944	0.857	0.959	0.929	0.928	0.887	0.889	0.887	0.807
DH			0.992	0.97	0.974	0.971	0.825	0.932	0.825	0.951	0.964	0.879	0.847	0.85	0.977	0.928	0.858	0.98	0.991	0.978	0.981	0.914	0.963	0.879	0.943	0.921	0.927	0.866	0.927	0.946	0.91	0.947	0.974	0.963	0.887	0.958	0.924	0.962	0.918	0.938	0.961	0.9	0.9	0.896	0.825
KG				0.988	0.988	0.932	0.807	0.899	0.868	0.923	0.94	0.868	0.839	0.829	0.96	0.922	0.846	0.979	0.979	0.981	0.914	0.963	0.879	0.943	0.921	0.927	0.866	0.927	0.946	0.91	0.962	0.958	0.924	0.918	0.938	0.897	0.921	0.943	0.888	0.904	0.927	0.927	0.868		
DN					0.988	0.998	0.854	0.938	0.952	0.949	0.944	0.993	0.952	0.887	0.975	0.906	0.887	1	0.996	0.926	0.939	0.939	0.961	0.972	0.932	0.959	0.893	0.978	0.955	0.951	0.966	0.949	0.971	0.988	0.955	0.937	0.956	0.937	0.922	0.975	0.996	0.967	0.966	0.901	0.854
HD						0.983	0.804	0.928	0.815	0.953	0.966	0.87	0.996	0.832	0.928	0.918	0.85	0.975	0.978	0.985	0.85	0.961	0.935	0.914	0.918	0.893	0.844	0.943	0.915	0.907	0.92	0.953	0.901	0.969	0.927	0.896	0.917	0.874	0.905	0.948	0.985	0.951	0.908	0.91	0.839
MD							0.881	0.947	0.936	0.956	0.954	0.922	0.895	0.883	0.984	0.965	0.901	0.983	0.985	1	0.901	0.984	0.977	0.974	0.967	0.947	0.934	0.991	0.97	0.965	0.94	0.957	0.944	0.991	0.975	0.958	0.973	0.94	0.941	0.982	0.981	0.98	0.956	0.977	0.908
GT								0.942	0.953	0.881	0.86	0.955	0.983	0.959	0.903	0.957	0.949	0.904	0.877	0.87	0.971	0.906	0.946	0.956	0.968	0.978	0.965	0.932	0.975	0.934	0.931	0.968	0.933	0.92	0.926	0.947	0.882	0.938	0.865	0.773	0.839	0.866	0.95	0.8	
LK									0.953	0.994	0.982	0.955	0.983	0.959	0.978	0.957	0.949	0.96	0.974	0.948	0.903	0.967	0.973	0.96	0.974	0.969	0.963	0.98	0.932	0.965	0.967	0.979	0.99	0.984	0.911	0.901	0.942	0.564	0.981	0.915	0.913	0.895	0.853	0.849	0.766
GU										0.894	0.875	0.987	0.986	0.989	0.913	0.965	0.989	0.906	0.88	0.872	0.965	0.898	0.945	0.95	0.967	0.972	0.973	0.974	0.92	0.969	0.922	0.931	0.978	0.933	0.911	0.911	0.936	0.863	0.932	0.858	0.769	0.784	0.858	0.862	0.787
RP											0.994	0.904	0.879	0.907	0.973	0.919	0.896	0.96	0.982	0.954	0.883	0.968	0.959	0.942	0.955	0.945	0.938	0.964	0.915	0.942	0.949	0.785	0.969	0.983	0.9	0.885	0.924	0.824	0.967	0.912	0.927	0.898	0.837	0.83	0.977
CW												0.882	0.858	0.879	0.985	0.92	0.875	0.954	0.97	0.95	0.853	0.946	0.934	0.917	0.929	0.911	0.9	0.943	0.886	0.916	0.93	0.953	0.94	0.968	0.881	0.853	0.577	0.797	0.935	0.906	0.929	0.904	0.567	0.83	0.826
DM													0.966	0.989	0.939	0.992	0.997	0.946	0.923	0.918	0.992	0.949	0.957	0.984	0.989	0.993	0.998	0.986	0.967	0.981	0.979	0.96	0.958	0.962	0.978	0.922	0.965	0.909	0.836	0.829	0.909	0.921	0.839		
SH														0.988	0.91	0.991	0.998	0.921	0.895	0.891	0.987	0.962	0.983	0.996	0.978	0.982	0.985	0.967	0.981	0.979	0.952	0.949	0.973	0.939	0.928	0.958	0.97	0.923	0.955	0.889	0.802	0.799	0.898	0.915	0.831
PN															0.878	0.953	0.994	0.913	0.907	0.873	0.979	0.926	0.971	0.953	0.926	0.99	0.995	0.972	0.938	0.975	0.965	0.964	0.99	0.942	0.891	0.926	0.948	0.871	0.963	0.842	0.767	0.895	0.858	0.872	0.777
AB																0.966	0.922	0.986	0.985	0.982	0.953	0.97	0.911	0.967	0.973	0.938	0.925	0.978	0.935	0.948	0.961	0.981	0.959	0.991	0.936	0.915	0.949	0.87	0.953	0.854	0.934	0.909	0.901	0.901	0.824
IM																	0.981	0.978	0.954	0.963	0.993	0.945	0.993	0.975	0.947	0.998	0.984	0.97	0.987	0.981	0.964	0.97	0.987	0.975	0.98	0.965	0.969	0.96	0.903	0.894	0.944	0.955	0.898		
GY																		0.926	0.908	0.897	0.987	0.939	0.961	0.972	0.982	0.993	0.99	0.976	0.955	0.98	0.961	0.964	0.982	0.948	0.919	0.952	0.991	0.911	0.873	0.881	0.802	0.792	0.892	0.907	0.817
UJ																			0.99	1	0.915	0.989	0.992	0.985	0.984	0.964	0.952	0.993	0.981	0.977	0.968	0.985	0.965	0.996	0.973	0.969	0.985	0.848	0.96	0.976	0.99	0.973	0.96	0.987	0.902
BP																				0.989	0.907	0.997	0.983	0.971	0.976	0.925	0.955	0.993	0.981	0.964	0.979	1	0.967	0.992	0.929	0.944	0.966	0.904	0.975	0.952	0.97	0.934	0.913	0.911	0.837
IN																					0.906	0.99	0.981	0.977	0.97	0.957	0.939	0.99	0.973	0.968	0.94	0.962	0.948	0.991	0.968	0.963	0.976	0.944	946	0.981	0.995	0.98	0.955	0.952	0.9
JR																						0.921	0.949	0.936	0.939	0.939	0.937	0.929	0.931	0.987	0.991	0.926	0.916	0.883	0.918	0.93	0.883	0.92	0.891	0.877	0.865	0.938	0.949	0.87	
HW																							0.992	0.985	0.985	0.978	0.969	0.981	0.981	0.973	0.74	0.984	0.972	0.987	0.939	0.97	0.984	0.936	0.98	0.96	0.97	0.936	0.936	0.95	0.861
SD																								1	1	0.995	0.986	0.998	0.992	0.995	0.969	0.969	0.987	0.989	0.956	0.979	0.976	0.943	0.983	0.966	0.957	0.941	0.903	0.902	0.84
KL																									0.998	0.992	0.984	0.995	0.989	0.998	0.973	0.983	0.982	0.984	0.964	0.985	0.996	0.956	0.974	0.965	0.908	0.945	0.956	0.964	0.895
RJ																										0.997	0.991	0.995	0.988	0.983	0.992	0.991	0.984	0.947	0.974	0.992	0.936	0.988	0.953	0.94	0.925	0.937	0.942	0.868	
DW																											0.996	0.981	0.989	0.983	0.987	0.994	0.972	0.925	0.969	0.992	0.998	0.933	0.916	0.898	0.909	0.924	0.832		
AD																												0.985	0.949	0.984	0.982	0.986	0.989	0.961	0.91	0.959	0.978	0.913	0.987	0.916	0.899	0.879	0.894	0.909	0.813
PA																													0.984	0.998	0.975	0.977	0.992	0.99	0.966	0.976	0.985	0.945	0.981	0.964	0.95	0.947	0.931	0.926	0.874
BN																														0.987	0.863	0.984	0.962	0.981	0.958	0.995	0.998	0.979	0.961	0.966	0.954	0.094	0.968	0.976	0.882
PU																															0.978	0.981	0.985	0.98	0.962	0.973	0.97	0.941	0.969	0.96	0.861	0.943	0.937	0.938	0.877
SI																																0.99	0.994	0.973	0.908	0.951	0.973	0.903	0.989	0.89	0.87	0.808	0.907	0.916	0.825
NA																																	0.991	0.987	0.915	0.956	0.982	0.905	0.982	0.908	0.898	0.831	0.912	0.922	0.824
MU																																		0.927	0.917	0.94	0.97	0.885	0.993	0.921	0.906	0.891	0.902	0.885	0.798
VP																																			0.963	0.954	0.975	0.889	0.969	0.969	0.973	0.959	0.932	0.962	0.94
VD																																				0.909	0.956	0.948	0.89	0.983	0.966	0.994	0.967	0.958	0.938
PJ																																					0.992	0.989	0.941	0.935	0.854	0.935	0.97	0.927	0.929
MA																																						0.97	0.965	0.964	0.954	0.939	0.964	0.976	0.907
GK																																							0.908	0.953	0.933	0.938	0.982	0.996	0.959
ML																																								0.885	0.906	0.84	0.873	0.896	0.776
BL																																									0.981	0.98	0.953	0.964	0.854
YS																																										0.985	0.918	0.916	0.872
PC																																											0.902	0.895	0.85
ER																																												0.993	0.985
TR																																													0.966
KR																																													

Fig. S1. Dendrogram of natural populations of *D. ananassae* based on UPGMA clustering of genetic identity values.