

Table S2. Mean Q-score of each of the seven clusters identified in the admixture analysis. The clusters were called after the breed they represented the most.

	MARM cluster	BERG cluster	FONN cluster	APUA cluster	LUGI cluster	DORO cluster	SILA cluster
APUA	5.2%	6.1%	9.7%	47.9%	24.6%	4.5%	2.1%
BERG	3.0%	80.2%	5.1%	3.5%	4.1%	2.5%	1.5%
DORO	4.0%	3.9%	5.2%	3.1%	6.3%	76.5%	1.1%
FONN	12.8%	5.0%	69.3%	4.4%	3.0%	2.4%	\3.1%
LUGI	2.5%	3.3%	4.3%	8.2%	77.3%	3.1%	1.2%
MANN	42.5%	7.4%	23.8%	11.4%	5.4%	3.8%	5.7%
MARM	92.9%	1.1%	2.8%	1.0%	0.4%	0.8%	1.1%
PALA	13.3%	10.5%	17.2%	18.9%	25.5%	9.6%	5.0%
SILA	13.1%	2.6%	7.4%	3.0%	1.5%	1.9%	70.4%

Herding shepherd dog breeds: Pastore Apuano (APUA), Bergamasco shepherd dog (BERG), Pastore d'Oropa (DORO), Lupino del Gigante (LUGI), and Pastore della Lessinia e del Lagorai (PALA); livestock guardian breeds: Fonni's dog (FONN), Mannara dog (MANN), Maremma and the Abruzzi sheepdog (MARM), and Pastore della Sila (SILA).