HISTORICAL RELATIONSHIPS BETWEEN SHEEP BREEDS ACCORDING TO THEIR MACROSCOPICAL FLEECE TRAITS

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- conflicting reports in the literature regarding the phenotypical relationships between American sheep breeds.

- In a previous study (2010) we attempted a classification of different American and European breeds to the characteristics of their wool (average values for each breed).

- this research is based on individual values, and only takes into account the macroscopic characteristics of the fibre.

. 666 animals

. 15 autochthonous American breeds.

. sampled animals randomly chosen

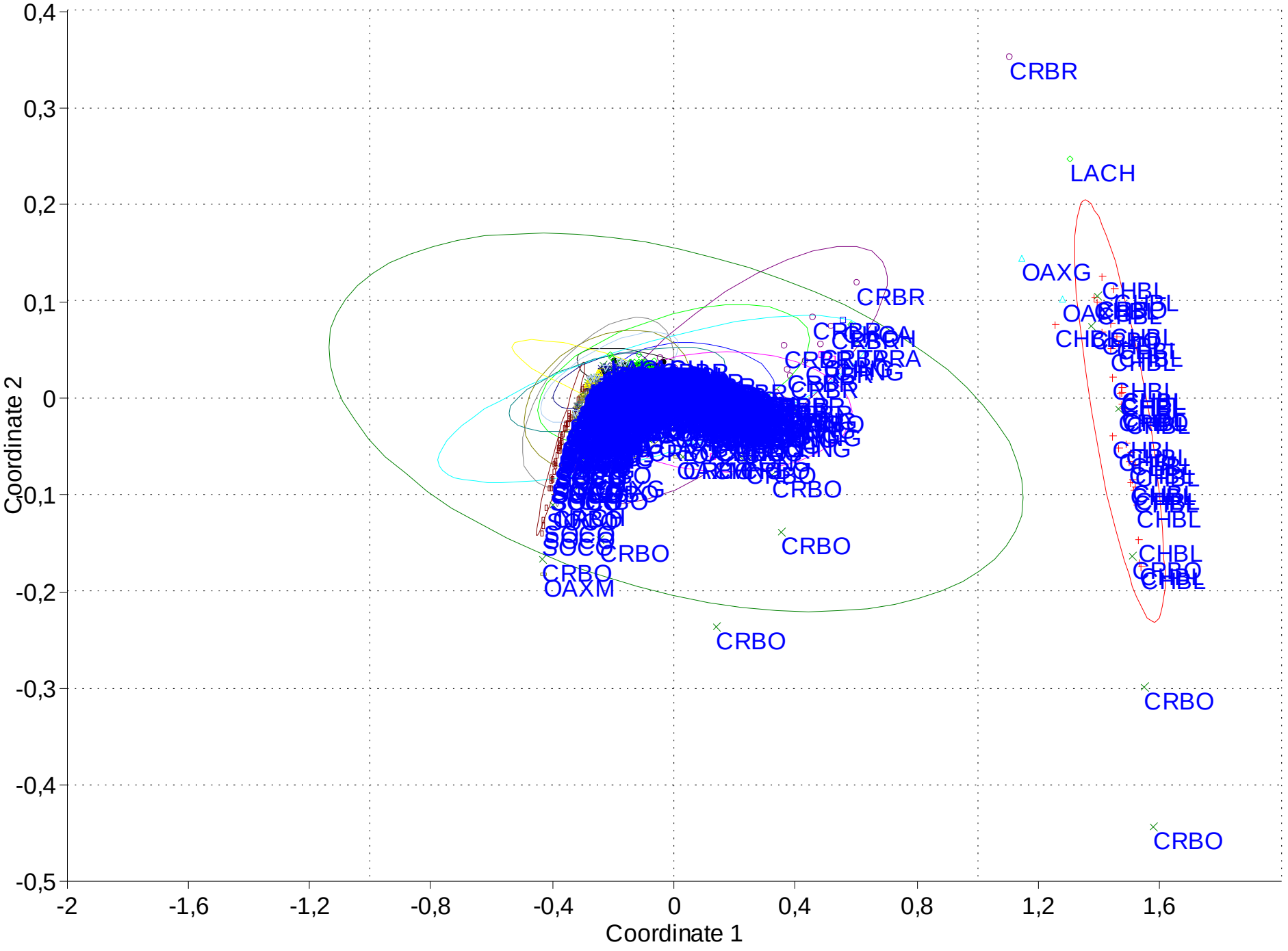
. >18 months old.

Blanca Colombiana	45	Mora Colombiana	27
Chiapas Blanca	32	Navajo Churro	29
Chiapas Café	44	Oaxaca	53
Chiapas Negra	32	Oaxaca Mixteca	61
Criolla Boliviana	82	Socorro	44
Crioula Brasileña	52	Tarahumara	43
Latxa Chilena	88	Zongolica	24
Linca	10		

Samples were taken randomly from the mid-lateral part of each ewe before shearing.
The following macroscopic characteristics were investigated:

Fibre length	% *kemp*
Long-coarse fibres length	Yield after alcohol scouring
Short-fine fibres length	
Kemp length	
% long -coarse fibres	
% short -fine fibres	

With the aim of obtaining an aggregate of breeds and relationships, a principal coordinate analysis was generated from the correlation matrix.

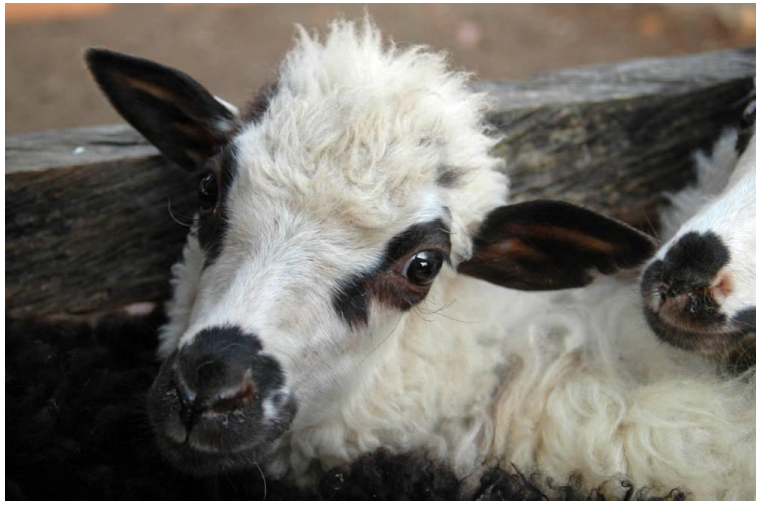


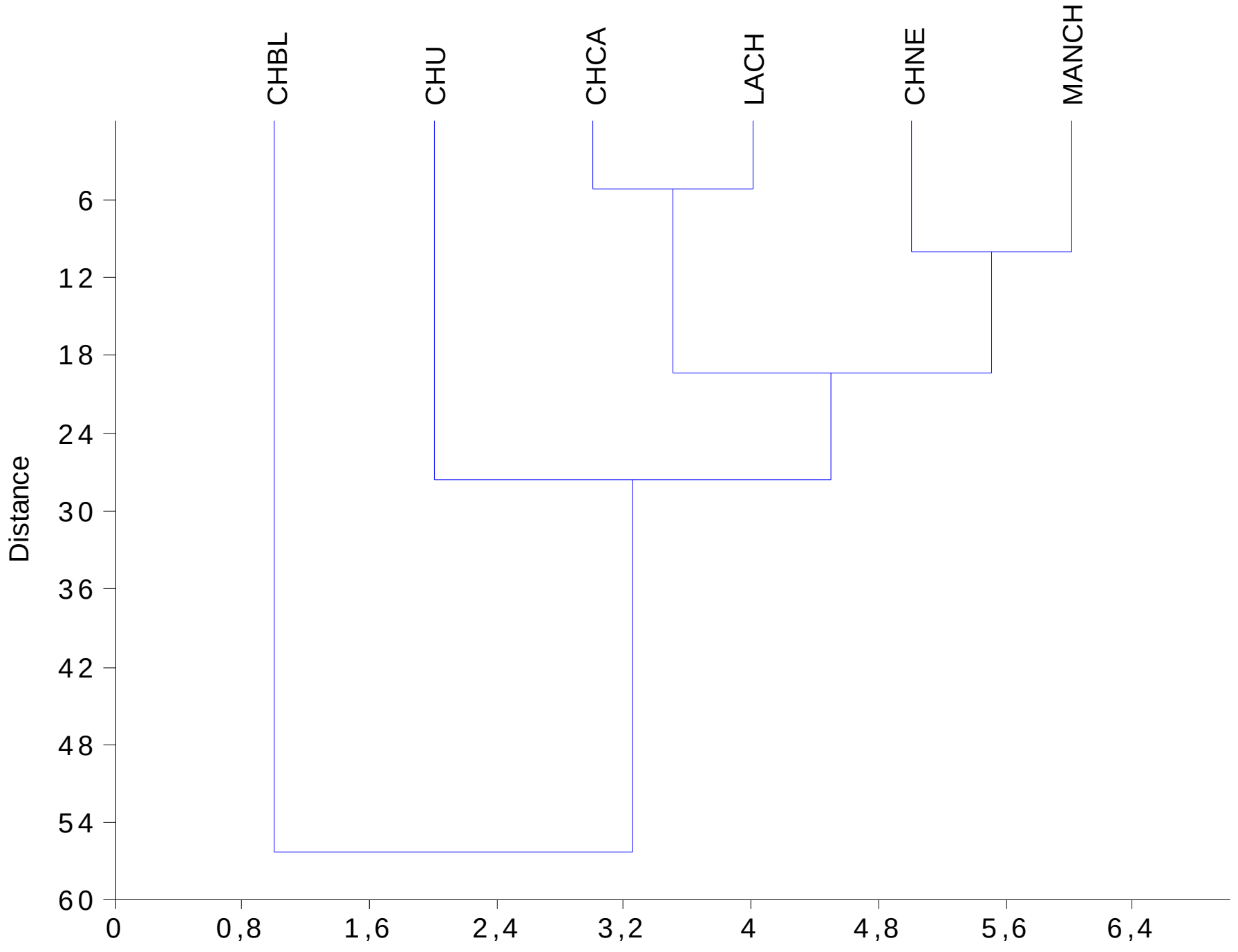
	% long -coarse fibres	% short -fine fibers
BCOL	15.2	80.9
CHBL	75.0	21.9
CHCA	20.7	75.5
CHNG	27.9	71.1
CRBO	23.1	73.6
CRBR	21.6	75.0
LACH	17.9	80.5
LINC	8.4	91.7
MOCO	3.0	96.9
NACH	12.5	86.9
OAXG	19.9	77.2
OAXM	11.3	87.5
SOCO	0.0	98.4
TARA	13.7	81.9
ZONG	10.0	87.6

‘long wool sheep’ long fibres:short fibres = 10:3

This would reinforce the hypothesis by which the 3 phenotypic sympatric varieties of the Chiapas sheep would be the expresion of 3 different genotypes, probably coming from different origins.

Spanish Churra, Lacha and Manchega sheeps respectively, for the white, coffee and black phenotypes.





The data reported by wool traits provide valuable assess for inter-breed comparison and moreover can help in the study of historical relationships between them.

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