



Coexistence through the Ages: The Role of Native Livestock Guardian Dogs and Traditional Ecological Knowledge as Key Resources in Conflict Mitigation between Pastoralists and Large Carnivores in the Romanian Carpathians

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Appendix 1 International standards of Carpathian endemic breeds of LGD (Romanian Kennel Club n.d.)

Name of the breed	Classification by FCI ^a	Breed description	Height at the withers
Romanian Carpathian Shepherd Dog (<i>Ciobănesc Românesc Carpatin</i>)	Group 1 Sheepdogs and Cattle Dogs Section 1 Sheepdogs.	medium length coat, harsh, dense, straight; color pale fawn overlaid with black (wolf-grey) of different tones; wolf-like snout;	Males: Ideally 65–73 cm (± 2 cm). Females: Ideally 59–67 cm (± 2 cm).
Mioritic Shepherd Dog (<i>Ciobănesc Românesc Mioritic</i>)	Group 1 Sheepdogs and Cattle Dogs Section 1 Sheepdogs.	long coat, harsh texture; color white with well-defined black or grey markings;	Males: Minimum 70 cm, ideal height is 75 cm. Females: Minimum 65 cm, ideal height is 70 cm.
Romanian Bucovina Shepherd Dog (<i>Ciobănesc Românesc de Bucovina</i>)	Group 2 Pinscher & Schnauzer, Molossoids breeds, Swiss Mountain and Cattle dogs. Section 2.2 Mountain type Molossoids.	medium length coat, at the neck region the hair is much longer forming a mane; main color of coat is a clear white or white-beige with distinct patches of grey, black or black with red-fawn reflections;	Males: 68–78 cm, ideal 71–75 cm Females: 64–72 cm, ideal 66–68 cm Tolerance: ± 4 cm
Romanian Raven Shepherd Dog (<i>Ciobănesc Românesc Corb</i>)	Group 2 Pinscher & Schnauzer, Molossoids breeds, Swiss Mountain and Cattle dogs. Section 2.2 Mountain type Molossoids.	short and dense coat, at the neck region the hair is longer forming a mane; color always black (like a raven) or black with white patches on the chest and the forequarters.	Males: 70–80 cm, ideal 75 cm Females: 65–75 cm, ideal 70 cm

^aFederation Cynologique Internationale

Appendix 2.

Questionnaire

1. Is there a local name for dogs used for guarding livestock other than shepherd dog?
 2. How does a good livestock guardian dog behave?
 3. How do you select a good guarding dog? Is there any special sign? Do you know any beliefs used in the past for selecting a good guarding dog?
 4. What is the value of a good guarding dog? What was the price for one in the past?
 5. With what do you feed the dogs at the sheepfold/summer farms? How many times per day?
 6. Is it important for a dog to be well fed?
 7. Is there any mutilation practiced nowadays? Was it done mainly in the past? What was the reason for this?
 8. How are the dogs behaving when they sense any wild carnivore in the area?
 9. Is it true that they have a special kind of barking for each species of large carnivore?
 10. How does a dog become a good guarding dog? Is there any training done by the herder? What is the role of the herder in this process?
 11. If a dog is not behaving, as it should, what should be done with it?
 12. When you are out on the pasture where are the dogs going? What is their position in regard to the flock?
 13. Is there a local name for dogs used for guarding livestock other than shepherd dog?
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Appendix 3. List of informants.

Informant	Name	Age	Occupation	Date	Village
Inf. 1	Chindriș I.	31 yrs	farmer	8-16.02.2016; 25-27.05.2016	leud
Inf. 2	Mariș G.	92 yrs	farmer herder	14.06.2014; 25.05.2016	leud
Inf. 3	Gradovici G.	76 yrs	farmer/herder	25-30.07.2016;	leud
Inf. 4	Mărăș C.	81 yrs	farmer/herder	11.02.2015; 24.09.2017	leud
Inf. 5	Brândău G.	60 yrs	farmer/herder	12.06.2014	leud
Inf. 6	Dunca S.	51 yrs	farmer/herder	27-29.07.2015; 17-22.02.2016	leud
Inf. 7	Chindriș I.	32 yrs	farmer/herder	23.05.2016	leud
Inf. 8	Chindriș G.	36 yrs	farmer/herder	23.05.2016	leud
Inf. 9	Chindriș D.	34 yrs	farmer/herder	23.05.2016	leud
Inf. 10	Chindriș A. P.	56 yrs	farmer/herder	23.05.2016	leud
Inf. 11	Chindriș V.P.	60 yrs	farmer/herder	23.05.2016	leud
Inf. 12	Chindriș G. A.	32 yrs	farmer/herder	19-22.02.2016; 04.10.2016	leud
Inf. 13	Bizău S. G.	70 yrs	farmer/herder	12.02.2015	leud
Inf. 14	Trifoi V.	31 yrs	farmer	16-25.06.2014	leud
Inf. 15	Chindriș V.	32 yrs	farmer/herder	10-15.02.2016	leud
Inf. 16	Hotico I.	38 yrs	farmer/herder	22.05.2016	leud
Inf. 17	Tutula I.	30 yrs	farmer/herder	23.02.2016	leud
Inf. 18	Dunca A.	17 yrs	farmer/herder	25-26.07.2015; 17-23.02.2016	leud
Inf. 19	Florea I.	48 yrs	farmer/herder	23.04. 2015	leud
Inf. 20	Chindriș G.	55 yrs	farmer/herder	21.06.2014	leud
Inf. 21	Tutula V.	70 yrs	farmer/herder	24.02.2016	leud
Inf. 22	Tutula G.	50 yrs	farmer/herder	25.02.2020	leud
Inf. 23	Bojin I.	70 yrs	farmer/herder	10.01.2020	Forotic
Inf. 24	Bojin E.	62 yrs	farmer	10.01.2020	Forotic
Inf. 25	Bojin I.	43 yrs	farmer/herder	10.01.2020	Forotic
Inf. 26	Bojin S.	36 yrs	farmer	10.01.2020	Forotic
Inf. 27	Bălan I.	92 yrs	farmer/beekeeper	20.07.2019	Forotic
Inf. 28	Molin V.	83 yrs	farmer	17.03.2018	Forotic
Inf. 29	Ivașcu I.	88 yrs	farmer/herder	16.03.2018	Forotic
Inf. 30	Ivașcu D.	54 yrs	farmer	02.10.2016	Forotic
Inf. 31	Ivașcu V.	82 yrs	farmer/herder	02.10.2016	Forotic
Inf. 32	Bălan D.	70 yrs	farmer	20.11.2018	Forotic
Inf. 34	Călariu I.	68 yrs	farmer	16.11.2018	Forotic
Inf. 35	Gherga S.	70 yrs	farmer	14.02.2014	Forotic
Inf. 36	Gherga P.	95 yrs	farmer/herder	10.02.2014	Forotic
Inf. 37	Boru I.	64 yrs	farmer	28.04.2018	Forotic
Inf. 38	Gherga A.	66 yrs	farmer/herder	26.03.2020	Forotic
Inf. 39	Cojocariu C.	54 yrs	farmer	08.03.2020	Forotic
Inf. 40	Botoș P.	78 yrs	farmer	09.03.2020	Forotic
Inf. 41	Daba I.	80 yrs	farmer	05.04.2017	Forotic

Appendix 3. (Continued).

Informant	Name	Age	Occupation	Date	Village
Inf. 42	Crăciunel D.	62 yrs	farmer/herder	22.07.2019	Slatina-Timiş
Inf. 43	Gaiţă D.	60 yrs	farmer/herder	23.07.2019	Verendin
Inf. 44	Bosioc G.	67 yrs	farmer/herder	23.07.2019	Verendin
Inf. 45	Aliman A.	68 yrs	transhumant shepherd	26.07.2019	Şugag
Inf. 46	Burzan I. M.	36 yrs	farmer/herder	14.08.2020	Târşa
Inf. 45	Burzan G.	62 yrs	farmer/herder	16.08.2020	Târşa
Inf. 46	Asiminesei G.	65 yrs	farmer/herder	18.03.2020	Râşnov
Inf. 47	Toşa A.	50 yrs	farmer/security guard	13.04.2020	Râşca
Inf. 48	Rotaru R.	48 yrs	retired miner/ hunting guard	11.04.2020	Petroşani
Inf. 49	Popa R.		ranger/LIFE Connect Carpathians	10.08.2020	Orăştie
Inf. 50	Chiriac S.		Consultant for the Romanian Environmental Protection Agency/Grant Director WolfLife	18.08.2020	Focşani