



**Non Genetic Factors
Affecting Hunting Ability
in Italian Scent Hound Dog**

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Italian Scent Hound

ENCI 27 November 1989

- FCI Code: 337
- Group: Hounds and Blood Hounds
- Coat: short haired or rough haired
- In 2015: 3644 short haired and 1106 rough haired, for a total of 4750 registrations.




Aim of the study

Assessment of the effect of five non genetic factors (sex, coat colour, coat types, competition judges, type of trial) on hare hunting performance in Italian Scent Hounds.

Materials

- A total of 1406 Italian Scent Hounds (525 males and 881 females) were studied.
- Creation of a database using 2250 results from boar hunting field trials held in North-Central Italy and Isle of Elba, between 2014 and 2015.

TRAITS CLASSIFICATION (I)

<input type="checkbox"/> COPPIA <input checked="" type="checkbox"/> MUTA		 VERIFICA ZOOTECNICA PER RAZZE DA SEGUITA SU LEPRE di <u>Bologna - Pianoro</u> del <u>28/10/13</u> CONDUTTORE SIG. <u>Balestrieri Rodolfo</u>							
RAZZA <u>SEG</u> <u>ITALIANO</u> <u>RASO, FULLY</u>		NOMI DEI SOGGETTI		<u>CICCO</u>	<u>BIMBA</u>	<u>IANI</u>	<u>FMI</u>	<u>FROR</u>	<u>FROR</u>
TURNO N. <u>1</u>		IDENTIFICAZIONE		<u>6654</u>	<u>73134</u>	<u>27318</u>	<u>31160</u>	<u>24568</u>	<u>15186</u>
PUNTI DI MERITO									
1. MORFOLOGIA	punti 30	<u>25</u>	<u>24</u>	<u>25</u>	<u>24</u>	<u>25</u>	<u>24</u>	<u>25</u>	<u>24</u>
2. STILE DI RAZZA	punti 20	<u>16</u>	<u>16</u>	<u>16</u>	<u>16</u>	<u>16</u>	<u>16</u>	<u>16</u>	<u>16</u>
3. CERCA	punti 10	<u>8</u>	<u>8</u>	<u>8</u>	<u>8</u>	<u>8</u>	<u>8</u>	<u>8</u>	<u>8</u>
4. ACCOSTAMENTO	punti 30	<u>22</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>22</u>	<u>24</u>	<u>22</u>	<u>24</u>
5. SCOVO	punti 30	<u>24</u>	<u>24</u>	<u>25</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>25</u>	<u>25</u>
6. SEGUITA	punti 50	<u>42</u>	<u>42</u>	<u>42</u>	<u>42</u>	<u>42</u>	<u>42</u>	<u>42</u>	<u>42</u>
7. VOCE	punti 30	<u>25</u>	<u>25</u>	<u>25</u>	<u>25</u>	<u>25</u>	<u>25</u>	<u>25</u>	<u>25</u>
TOTALE PUNTI DI MERITO 200		<u>162</u>	<u>163</u>	<u>165</u>	<u>163</u>	<u>162</u>	<u>164</u>		
PUNTI DI PENALIZZAZIONE									
1. PRECARIO EQUILIBRIO PSICHICO									
2. DARE LA VOCE SENZA RAGIONE									
3. TENDERE A IMBALLARE E SBANDARE I COMPAGNI									
4. RITARDATO RECUPERO A FINE PROVA									
TOTALE PUNTI DI PENALIZZAZIONE 30									
TOTALE PUNTI ASSEGNATI		<u>162</u>	<u>163</u>	<u>165</u>	<u>163</u>	<u>162</u>	<u>164</u>		
QUALIFICA INDIVIDUALE		<u>162</u>	<u>163</u>	<u>165</u>	<u>163</u>	<u>162</u>	<u>164</u>		
VALUTAZIONE DI COPPIA O MUTA	MEDIA DEI PUNTI <u>163,17</u>	QUALIFICA <input checked="" type="checkbox"/>			CLASSIFICA <u>1</u>				
INIZIO PROVA ORE <u>9,15</u>		RELAZIONE <u>Liberata famiglia di 5 Italiani appena</u> <u>presso un'isola in breve con sistema</u> <u>di 1 con voce costante e</u> <u>la parte di un'isola da parte</u> <u>ed in breve fino alla fine del</u>							
COND. CLIMATICHE <u>Buoni condizioni</u>		LA GIURIA <u>Verzetti</u>			FINE PROVA ORE <u>10,13</u>				

TRAITS CLASSIFICATION (II)

Trait	Score	Judging criteria
Morphology	1 - 30	Conformity to the standard
Breed style	1 - 20	Uniformity of behaviour
Search	1 - 10	Intelligence, passion, discipline
Approach	1 - 30	Scenting ability, cohesion
Voice	1 - 30	Timbre and tone, expressivity
Ability to flush out the prey	1 - 30	Finding and driving out the hare from his lair
Chasing of prey	1 - 50	Tenacity and accuracy

FIXED EFFECTS

Fixed Effects	Levels
Sex	2
Coat Colour	2
Coat Types	2
Type of Trial	3
Competition Judges	3

RESULTS

Coat Colour vs Voice

Trait	Coat Colour	Mean	Std. Deviation	N	Sig.
Voice	Black	23,23	4,278	591	,001
	Solid Fawn	24,33	2,304	461	
	Total	23,71	3,583	1052	

RESULTS

Coat Type vs Breed Style and Search

Trait	Coat Type	Mean	Std. Deviation	N	Sig.
Breed Style	Short Haired	35,61	10,971	1000	,05
	Rough Haired	33,21	10,661	249	
	Total	35,13	10,948	1249	
Search	Short Haired	14,31	3,470	1135	,05
	Rough Haired	13,24	3,532	275	
	Total	14,10	3,507	1410	

RESULTS

Type of Trial vs Morphology and Breed Style

Trait	Type of trial	Mean	Std. Deviation	N	Sig.
Morphology	Individual	32,69	7,779	35	,0001
	Pair	33,17	12,211	222	
	Pack	37,18	8,158	1126	
	Total	36,42	9,057	1383	
Breed Style	Individual	29,97	11,522	34	,0001
	Pair	31,82	13,463	224	
	Pack	36,27	9,933	1117	
	Total	35,39	10,779	1375	

RESULTS

Type of Trial vs Search and Approach

Trait	Type of trial	Mean	Std. Deviation	N	Sig.
Search	Individual	13,17	3,496	29	,0001
	Pair	13,63	4,196	261	
	Pack	14,34	3,241	1264	
	Total	14,20	3,436	1554	
Approach	Individual	22,04	2,710	27	,0001
	Pair	19,47	7,225	217	
	Pack	22,00	4,565	1096	
	Total	21,59	5,145	1340	

RESULTS

Type of Trial vs Voice

Trait	Type of trial	Mean	Std. Deviation	N	Sig.
Voice	Individual	24,00	1,682	30	,0001
	Pair	22,53	5,775	246	
	Pack	23,89	3,360	1275	
	Total	23,67	3,854	1551	

RESULTS

Type of Trial vs Ability to Flush out and Chasing of prey

Trait	Type of trial	Mean	Std. Deviation	N	Sig.
Ability to flush out the prey	Individual	21,68	3,782	28	,0001
	Pair	19,61	7,388	215	
	Pack	21,79	4,850	1065	
	Total	21,43	5,388	1308	
Chasing of prey	Individual	31,11	6,321	28	,0001
	Pair	26,95	10,799	209	
	Pack	30,90	7,386	1064	
	Total	30,27	8,137	1301	

RESULTS

Competition Judges vs Morphology and Breed Style

Trait	Judges	Mean	Std. Deviation	N	Sig.
Morphology	1	36,39	9,100	1368	,0001
	2	39,50	1,000	10	
	3	38,40	, 894	5	
	Total	36,42	9,057	1383	
Breed Style	1	35,35	10,829	1360	,0001
	2	37,50	3,274	10	
	3	38,40	, 894	5	
	Total	35,39	10,779	1375	

RESULTS

Competition Judges vs Search and Approach

Trait	Judges	Mean	Std. Deviation	N	Sig.
Search	1	14,19	9,100	1535	,0001
	2	12,10	6,437	10	
	3	14,67	,707	9	
	Total	14,20	3,436	1554	
Approach	1	21,58	5,169	1325	,0001
	2	22,20	1,549	10	
	3	24,80	,837	5	
	Total	21,59	5,145	1340	

RESULTS

Competition Judges vs Voice

Trait	Judges	Mean	Std. Deviation	N	Sig.
Voice	1	23,67	3,871	1532	,0001
	2	22,50	1,581	10	
	3	24,89	1,691	9	
	Total	23,67	3,854	1551	

RESULTS

Competition Judges vs Ability to Flush out and Chasing of prey

Trait	Judges	Mean	Std. Deviation	N	Sig.
Ability to flush out the prey	1	21,42	5,416	1293	,0001
	2	19,20	5,865	10	
	3	24,40	, 548	5	
	Total	21,43	5,388	1308	
Chasing of prey	1	30,26	8,181	1286	,0001
	2	35,10	1,792	10	
	3	29,00	2,236	5	
	Total	30,27	8,137	1301	

Conclusions

- Sex, coat colour and coat colour had no, or limited effect, on the seven hunting traits.
- Type of trial had a significant effect on all the seven hunting traits ($P < 0.001$).
- Judges factor was highly significant for all the seven hunting traits ($P < 0.001$).

Future implications

- Our findings are the first step toward the genetic quantification of aptitudes in a hound breed.
- To define a model for the linear evaluation of the aptitude to work for the Italian Scent Hound.
- To improve selective choices through a rationalization of breeding strategies.

THANK YOU FOR YOUR KIND ATTENTION



Denis
Zilber