

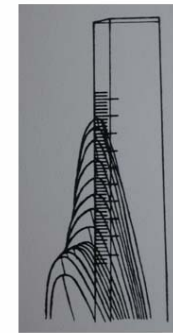
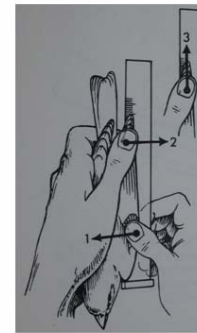
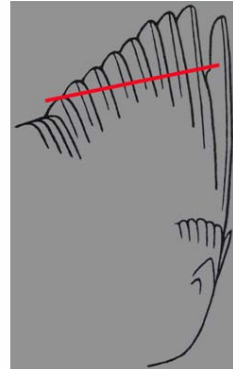
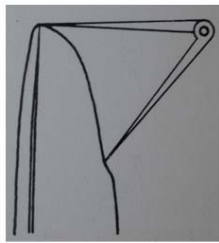
**METODI PER L'IDENTIFICAZIONE DI CANNAIOLA VERDOGNOLA *ACROCEPHALUS*
PALUSTRIS E CANNAIOLA COMUNE *ACROCEPHALUS SCIRPACEUS*.**

**Sergio Fasano, Ariele Magnani, Marco Bandini, Lucio Calesini,
Andrea Galimberti, Lucio Panzarin e Marco Pavia**

2007

Kelly et al. 2001

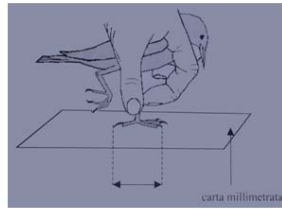
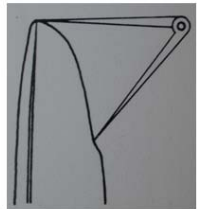
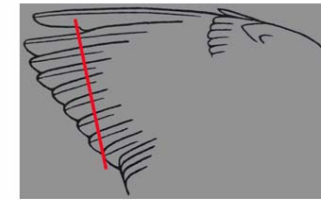
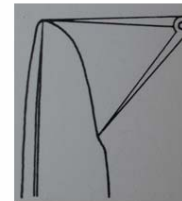
lunghezza notch * proiezione notch



Corda massima * punta ala-1RS

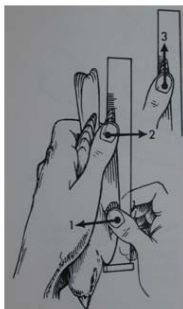
IFM

lunghezza notch * proiezione notch

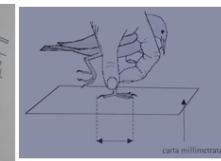
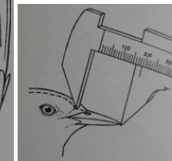
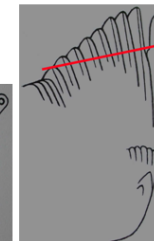
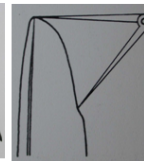
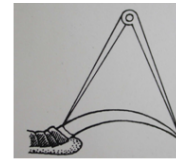


lungh. notch * (piede int. con artigli)²

(corda massima)²

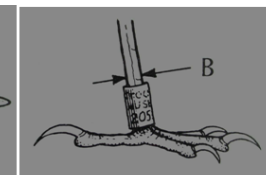
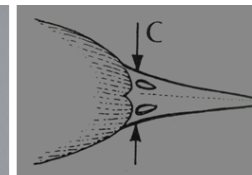
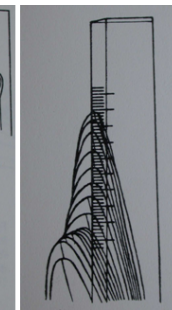
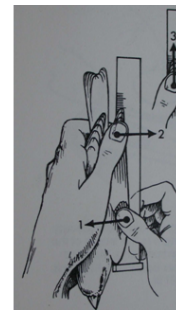


IFM3



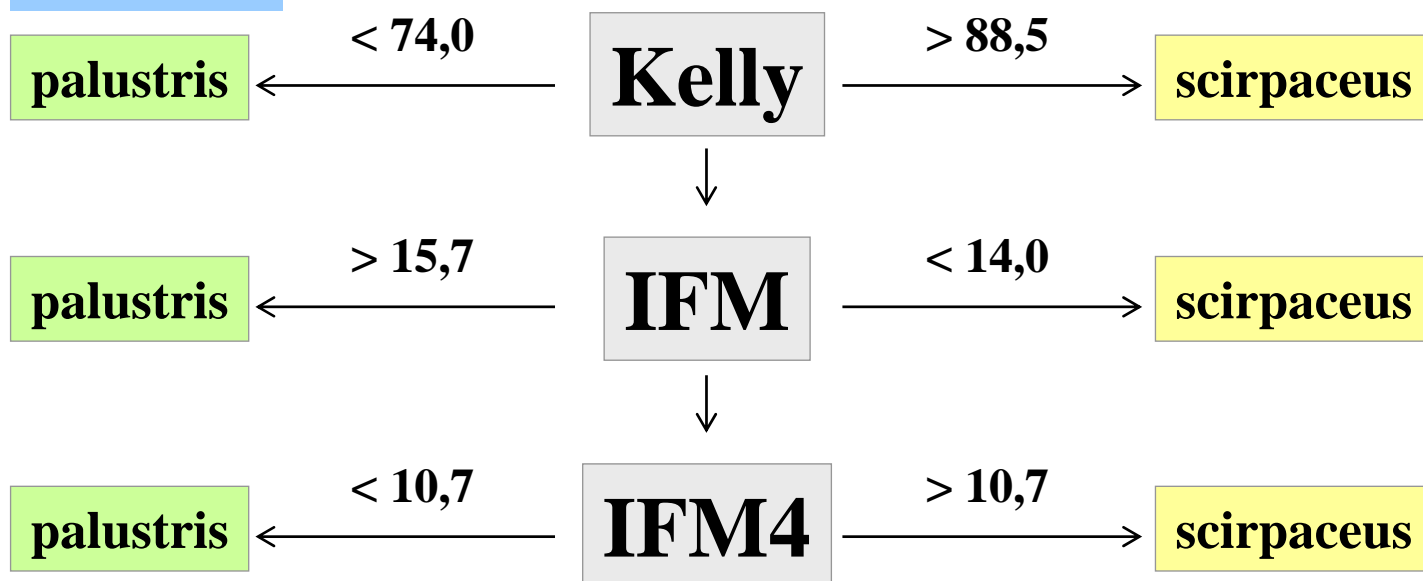
lungh. artiglio post. * lungh. notch * proiezione notch * becco a cranio * (piede int. con artigli)²

(corda massima)² * punta ala-1RS * largh. becco * largh. tarso

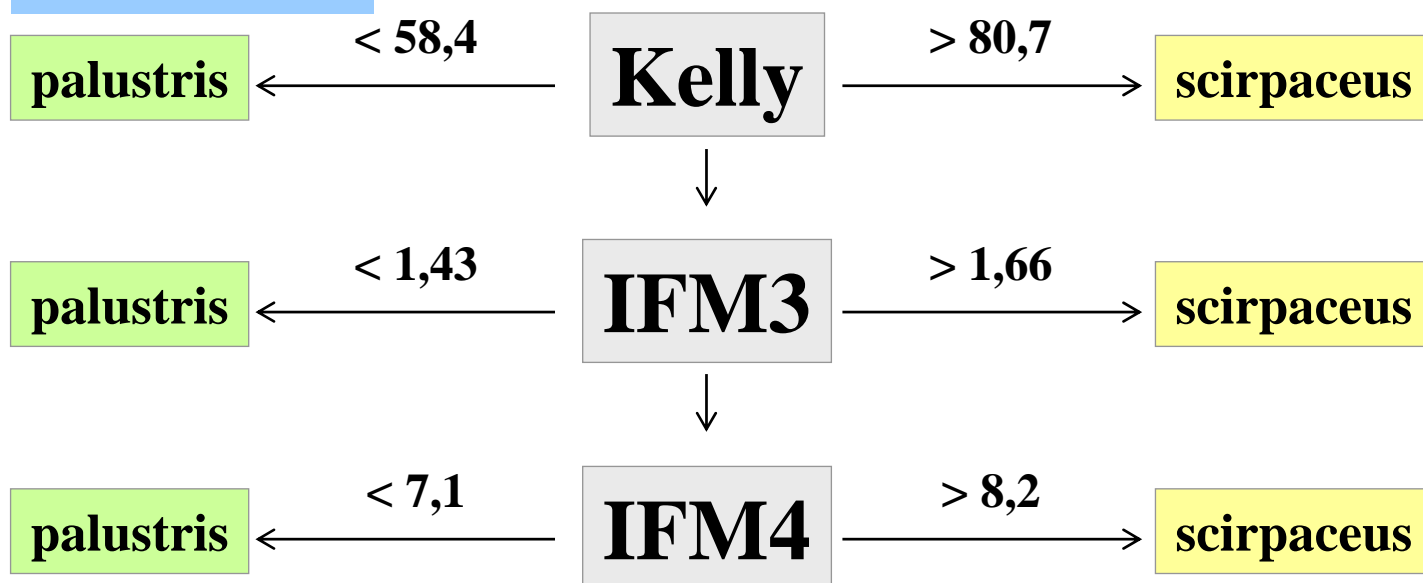


IFM4

Adulti



Giovani



Per calcolare i valori soglia, utili a discriminare le due specie, si è analizzato un set iniziale di dati, relativo a 1.304 individui, raccolto, tra il 2001 ed il 2005 durante le migrazioni ed il periodo riproduttivo, in 10 stazioni di inanellamento dislocate in Piemonte, Veneto, Emilia Romagna e Toscana. La validazione dei risultati è stata ottenuta grazie ad un campione di 407 individui nidificanti in località dove le due specie nidificano in 'purezza'.

Si ritiene conveniente iniziare la determinazione effettuando una prima selezione applicando il metodo KELLY e successivamente, se necessario, IFM per gli adulti ed IFM3 per i giovani, tutti e tre facilmente applicabili sul campo grazie alle tabelle di contingenza allegate.

Nel caso questi metodi non permettano l'identificazione si consiglia di applicare il metodo IFM4.

Adulti	Cannaiola verdognola	Cannaiola comune
IFM4	<10,7	>10,7
IFM3	<1,50	>1,65
IFM	>15,7	<14,0
KELLY	<74,0	>88,5

Giovani	Cannaiola verdognola	Cannaiola comune
IFM4	<7,1	>8,2
IFM3	<1,43	>1,66
IFM	>23,5	<15,4
KELLY	<58,4	>80,7

Cannaiola verdognola Sovrapposizione Cannaiola comune

Proiezione notch 2RP	11	77,0	82,5	88,0	93,5	99,0	104,5	110,0	115,5	121,0	126,5	132,0	137,5	143,0	148,5	154,0	159,5	165,0
	10,5	73,5	78,8	84,0	89,3	94,5	99,8	105,0	110,3	115,5	120,8	126,0	131,3	136,5	141,8	147,0	152,3	157,5
	10	70,0	75,0	80,0	85,0	90,0	95,0	100,0	105,0	110,0	115,0	120,0	125,0	130,0	135,0	140,0	145,0	150,0
	9,5	66,5	71,3	76,0	80,8	85,5	90,3	95,0	99,8	104,5	109,3	114,0	118,8	123,5	128,3	133,0	137,8	142,5
	9	63,0	67,5	72,0	76,5	81,0	85,5	90,0	94,5	99,0	103,5	108,0	112,5	117,0	121,5	126,0	130,5	135,0
	8,5	59,5	63,8	68,0	72,3	76,5	80,8	85,0	89,3	93,5	97,8	102,0	106,3	110,5	114,8	119,0	123,3	127,5
	8	56,0	60,0	64,0	68,0	72,0	76,0	80,0	84,0	88,0	92,0	96,0	100,0	104,0	108,0	112,0	116,0	120,0
	7,5	52,5	56,3	60,0	63,8	67,5	71,3	75,0	78,8	82,5	86,3	90,0	93,8	97,5	101,3	105,0	108,8	112,5
	7	49,0	52,5	56,0	59,5	63,0	66,5	70,0	73,5	77,0	80,5	84,0	87,5	91,0	94,5	98,0	101,5	105,0
	6,5	45,5	48,8	52,0	55,3	58,5	61,8	65,0	68,3	71,5	74,8	78,0	81,3	84,5	87,8	91,0	94,3	97,5
	6	42,0	45,0	48,0	51,0	54,0	57,0	60,0	63,0	66,0	69,0	72,0	75,0	78,0	81,0	84,0	87,0	90,0
	5,5	38,5	41,3	44,0	46,8	49,5	52,3	55,0	57,8	60,5	63,3	66,0	68,8	71,5	74,3	77,0	79,8	82,5
	5	35,0	37,5	40,0	42,5	45,0	47,5	50,0	52,5	55,0	57,5	60,0	62,5	65,0	67,5	70,0	72,5	75,0
Kelly Adulti	7	7,5	8	8,5	9	9,5	10	10,5	11	11,5	12	12,5	13	13,5	14	14,5	15	
	Lunghezza notch 2RP (mm)																	

Proiezione notch 2RP	11	77,0	82,5	88,0	93,5	99,0	104,5	110,0	115,5	121,0	126,5	132,0	137,5	143,0	148,5	154,0	159,5	165,0
	10,5	73,5	78,8	84,0	89,3	94,5	99,8	105,0	110,3	115,5	120,8	126,0	131,3	136,5	141,8	147,0	152,3	157,5
	10	70,0	75,0	80,0	85,0	90,0	95,0	100,0	105,0	110,0	115,0	120,0	125,0	130,0	135,0	140,0	145,0	150,0
	9,5	66,5	71,3	76,0	80,8	85,5	90,3	95,0	99,8	104,5	109,3	114,0	118,8	123,5	128,3	133,0	137,8	142,5
	9	63,0	67,5	72,0	76,5	81,0	85,5	90,0	94,5	99,0	103,5	108,0	112,5	117,0	121,5	126,0	130,5	135,0
	8,5	59,5	63,8	68,0	72,3	76,5	80,8	85,0	89,3	93,5	97,8	102,0	106,3	110,5	114,8	119,0	123,3	127,5
	8	56,0	60,0	64,0	68,0	72,0	76,0	80,0	84,0	88,0	92,0	96,0	100,0	104,0	108,0	112,0	116,0	120,0
	7,5	52,5	56,3	60,0	63,8	67,5	71,3	75,0	78,8	82,5	86,3	90,0	93,8	97,5	101,3	105,0	108,8	112,5
	7	49,0	52,5	56,0	59,5	63,0	66,5	70,0	73,5	77,0	80,5	84,0	87,5	91,0	94,5	98,0	101,5	105,0
	6,5	45,5	48,8	52,0	55,3	58,5	61,8	65,0	68,3	71,5	74,8	78,0	81,3	84,5	87,8	91,0	94,3	97,5
	6	42,0	45,0	48,0	51,0	54,0	57,0	60,0	63,0	66,0	69,0	72,0	75,0	78,0	81,0	84,0	87,0	90,0
	5,5	38,5	41,3	44,0	46,8	49,5	52,3	55,0	57,8	60,5	63,3	66,0	68,8	71,5	74,3	77,0	79,8	82,5
	5	35,0	37,5	40,0	42,5	45,0	47,5	50,0	52,5	55,0	57,5	60,0	62,5	65,0	67,5	70,0	72,5	75,0
Kelly Giovani	7	7,5	8	8,5	9	9,5	10	10,5	11	11,5	12	12,5	13	13,5	14	14,5	15	
	Lunghezza notch 2RP (mm)																	

Valori di Corda massima * Punta ala 1° remigante secondaria

Corda massima (mm)	74,0	962	999	1036	1073	1110	1147	1184	1221	1258	1295	1332	1369	1406	1443	1480	1517	1554	1591	1628	1665	1702	1739	1776
	73,5	956	992	1029	1066	1103	1139	1176	1213	1250	1286	1323	1360	1397	1433	1470	1507	1544	1580	1617	1654	1691	1727	1764
	73,0	949	986	1022	1059	1095	1132	1168	1205	1241	1278	1314	1351	1387	1424	1460	1497	1533	1570	1606	1643	1679	1716	1752
	72,5	943	979	1015	1051	1088	1124	1160	1196	1233	1269	1305	1341	1378	1414	1450	1486	1523	1559	1595	1631	1668	1704	1740
	72,0	936	972	1008	1044	1080	1116	1152	1188	1224	1260	1296	1332	1368	1404	1440	1476	1512	1548	1584	1620	1656	1692	1728
	71,5	930	965	1001	1037	1073	1108	1144	1180	1216	1251	1287	1323	1359	1394	1430	1466	1502	1537	1573	1609	1645	1680	1716
	71,0	923	959	994	1030	1065	1101	1136	1172	1207	1243	1278	1314	1349	1385	1420	1456	1491	1527	1562	1598	1633	1669	1704
	70,5	917	952	987	1022	1058	1093	1128	1163	1199	1234	1269	1304	1340	1375	1410	1445	1481	1516	1551	1586	1622	1657	1692
	70,0	910	945	980	1015	1050	1085	1120	1155	1190	1225	1260	1295	1330	1365	1400	1435	1470	1505	1540	1575	1610	1645	1680
	69,5	904	938	973	1008	1043	1077	1112	1147	1182	1216	1251	1286	1321	1355	1390	1425	1460	1494	1529	1564	1599	1633	1668
	69,0	897	932	966	1001	1035	1070	1104	1139	1173	1208	1242	1277	1311	1346	1380	1415	1449	1484	1518	1553	1587	1622	1656
	68,5	891	925	959	993	1028	1062	1096	1130	1165	1199	1233	1267	1302	1336	1370	1404	1439	1473	1507	1541	1576	1610	1644
	68,0	884	918	952	986	1020	1054	1088	1122	1156	1190	1224	1258	1292	1326	1360	1394	1428	1462	1496	1530	1564	1598	1632
	67,5	878	911	945	979	1013	1046	1080	1114	1148	1181	1215	1249	1283	1316	1350	1384	1418	1451	1485	1519	1553	1586	1620
	67,0	871	905	938	972	1005	1039	1072	1106	1139	1173	1206	1240	1273	1307	1340	1374	1407	1441	1474	1508	1541	1575	1608
	66,5	865	898	931	964	998	1031	1064	1097	1131	1164	1197	1230	1264	1297	1330	1363	1397	1430	1463	1496	1530	1563	1596
	66,0	858	891	924	957	990	1023	1056	1089	1122	1155	1188	1221	1254	1287	1320	1353	1386	1419	1452	1485	1518	1551	1584
	65,5	852	884	917	950	983	1015	1048	1081	1114	1146	1179	1212	1245	1277	1310	1343	1376	1408	1441	1474	1507	1539	1572
	65,0	845	878	910	943	975	1008	1040	1073	1105	1138	1170	1203	1235	1268	1300	1333	1365	1398	1430	1463	1495	1528	1560
	64,5	839	871	903	935	968	1000	1032	1064	1097	1129	1161	1193	1226	1258	1290	1322	1355	1387	1419	1451	1484	1516	1548
	64,0	832	864	896	928	960	992	1024	1056	1088	1120	1152	1184	1216	1248	1280	1312	1344	1376	1408	1440	1472	1504	1536
	63,5	826	857	889	921	953	984	1016	1048	1080	1111	1143	1175	1207	1238	1270	1302	1334	1365	1397	1429	1461	1492	1524
	63,0	819	851	882	914	945	977	1008	1040	1071	1103	1134	1166	1197	1229	1260	1292	1323	1355	1386	1418	1449	1481	1512
	62,5	813	844	875	906	938	969	1000	1031	1063	1094	1125	1156	1188	1219	1250	1281	1313	1344	1375	1406	1438	1469	1500
62,0	806	837	868	899	930	961	992	1023	1054	1085	1116	1147	1178	1209	1240	1271	1302	1333	1364	1395	1426	1457	1488	
61,5	800	830	861	892	923	953	984	1015	1046	1076	1107	1138	1169	1199	1230	1261	1292	1322	1353	1384	1415	1445	1476	
61,0	793	824	854	885	915	946	976	1007	1037	1068	1098	1129	1159	1190	1220	1251	1281	1312	1342	1373	1403	1434	1464	
	13,0	13,5	14,0	14,5	15,0	15,5	16,0	16,5	17,0	17,5	18,0	18,5	19,0	19,5	20,0	20,5	21,0	21,5	22,0	22,5	23,0	23,5	24,0	
	Punta ala 1° remigante secondaria (mm)																							

Valori di (Piede interno con unghie)^2 * Lunghezza notch

Piede interno con unghie (mm)	30,50	6512	6977	7442	7907	8372	8837	9303	9768	10233	10698	11163	11628	12093	12558	13024	13489	13954
	30,25	6405	6863	7321	7778	8236	8693	9151	9608	10066	10523	10981	11438	11896	12353	12811	13268	13726
	30,00	6300	6750	7200	7650	8100	8550	9000	9450	9900	10350	10800	11250	11700	12150	12600	13050	13500
	29,75	6195	6638	7081	7523	7966	8408	8851	9293	9736	10178	10621	11063	11506	11948	12391	12833	13276
	29,50	6092	6527	6962	7397	7832	8267	8703	9138	9573	10008	10443	10878	11313	11748	12184	12619	13054
	29,25	5989	6417	6845	7272	7700	8128	8556	8983	9411	9839	10267	10695	11122	11550	11978	12406	12833
	29,00	5887	6308	6728	7149	7569	7990	8410	8831	9251	9672	10092	10513	10933	11354	11774	12195	12615
	28,75	5786	6199	6613	7026	7439	7852	8266	8679	9092	9505	9919	10332	10745	11159	11572	11985	12398
	28,50	5686	6092	6498	6904	7310	7716	8123	8529	8935	9341	9747	10153	10559	10965	11372	11778	12184
	28,25	5586	5985	6385	6784	7183	7582	7981	8380	8779	9178	9577	9976	10375	10774	11173	11572	11971
	28,00	5488	5880	6272	6664	7056	7448	7840	8232	8624	9016	9408	9800	10192	10584	10976	11368	11760
	27,75	5390	5775	6161	6546	6931	7316	7701	8086	8471	8856	9241	9626	10011	10396	10781	11166	11551
	27,50	5294	5672	6050	6428	6806	7184	7563	7941	8319	8697	9075	9453	9831	10209	10588	10966	11344
	27,25	5198	5569	5941	6312	6683	7054	7426	7797	8168	8539	8911	9282	9653	10025	10396	10767	11138
	27,00	5103	5468	5832	6197	6561	6926	7290	7655	8019	8384	8748	9113	9477	9842	10206	10571	10935
	26,75	5009	5367	5725	6082	6440	6798	7156	7513	7871	8229	8587	8945	9302	9660	10018	10376	10733
	26,50	4916	5267	5618	5969	6320	6671	7023	7374	7725	8076	8427	8778	9129	9480	9832	10183	10534
	26,25	4823	5168	5513	5857	6202	6546	6891	7235	7580	7924	8269	8613	8958	9302	9647	9991	10336
	26,00	4732	5070	5408	5746	6084	6422	6760	7098	7436	7774	8112	8450	8788	9126	9464	9802	10140
	25,75	4641	4973	5305	5636	5968	6299	6631	6962	7294	7625	7957	8288	8620	8951	9283	9614	9946
25,50	4552	4877	5202	5527	5852	6177	6503	6828	7153	7478	7803	8128	8453	8778	9104	9429	9754	
25,25	4463	4782	5101	5419	5738	6057	6376	6694	7013	7332	7651	7970	8288	8607	8926	9245	9563	
25,00	4375	4688	5000	5313	5625	5938	6250	6563	6875	7188	7500	7813	8125	8438	8750	9063	9375	
24,75	4288	4594	4901	5207	5513	5819	6126	6432	6738	7044	7351	7657	7963	8270	8576	8882	9188	
24,50	4202	4502	4802	5102	5402	5702	6003	6303	6603	6903	7203	7503	7803	8103	8404	8704	9004	
24,25	4116	4410	4705	4999	5293	5587	5881	6175	6469	6763	7057	7351	7645	7939	8233	8527	8821	
24,00	4032	4320	4608	4896	5184	5472	5760	6048	6336	6624	6912	7200	7488	7776	8064	8352	8640	
	7,0	7,5	8,0	8,5	9,0	9,5	10,0	10,5	11,0	11,5	12,0	12,5	13,0	13,5	14,0	14,5	15,0	
	Lunghezza notch 2RP (mm)																	

