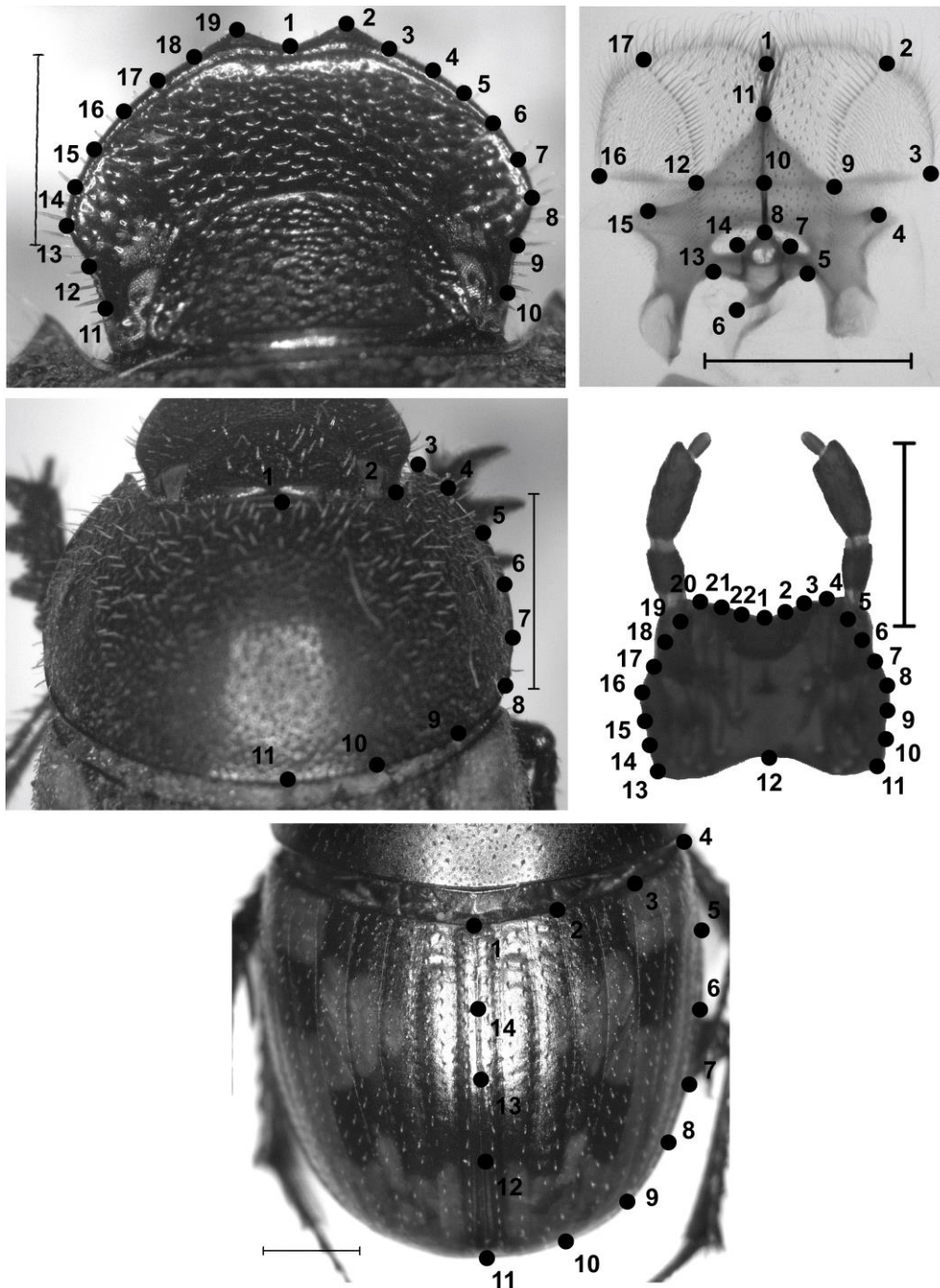


SUPPORTING INFORMATION



Appendix 1 - Figure S1. Points configuration of head (scalebar = 1 mm), epipharynx (scalebar = 0.5 mm), pronotum (scalebar = 2 mm), mentum (scalebar = 0.5 mm), and right elytron (scalebar = 1 mm).

Appendix 2 - Table S1. Matrix of discrete and continuous characters used for the phylogenetic analysis.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<i>bonasus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>acutus</i>	0	1	0	0	1	1	2	1	1	1	1	2	0	1	1	1
<i>bituberculatus</i>	0	1	0	0	1	2	2	1	2	2	1	1	1	2	1	1
<i>depressus</i>	0	1	1	1	1	1	2	0	2	1	2	1	0	1	0	1
<i>fallax</i>	0	1	0	1	1	1	2	1	2	1	1	1	0	2	1	1
<i>laceratus</i>	1	0	1	0	1	0	1	0	0	0	1	1	1	1	1	1
<i>pallens</i>	0	2	1	1	0	2	1	1	0	1	1	1	1	2	1	0
<i>utete</i>	0	2	1	1	0	0	0	?	0	?	?	?	2	2	1	?
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
<i>bonasus</i>	0	0	0	0	0	0	0	0	-	0	1.011	1.233	1.243	1.257	1.384	0.991
<i>acutus</i>	1	0	1	1	1	1	0	0	2	0	1.023	1.279	1.264	1.284	1.377	1.023
<i>bituberculatus</i>	0	0	1	1	1	1	0	0	0	0	1.023	1.268	1.260	1.279	1.369	1.034
<i>depressus</i>	1	0	1	1	1	1	0	0	2	0	1.023	1.259	1.263	1.277	1.385	1.021
<i>fallax</i>	0	0	1	1	1	1	0	0	2	1	1.013	1.261	1.255	1.277	1.386	1.029
<i>laceratus</i>	0	1	1	0	1	0	0	0	1	0	1.021	1.285	1.320	1.269	1.366	1.011
<i>pallens</i>	0	1	0	0	0	0	1	1	-	0	1.031	1.249	1.291	1.245	1.363	1.009
<i>utete</i>	?	?	?	?	?	?	1	1	-	1	1.019	1.262	1.273	1.261	1.366	1.011
	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
<i>bonasus</i>	1.269	0.965	1.105	0.814	0.944	0.753	1.043	0.873	1.002	0.923	1.150	1.015	1.009	1.023	1.017	1.153
<i>acutus</i>	1.206	0.937	1.097	0.799	0.946	0.743	1.052	0.877	0.994	0.900	1.122	1.009	1.010	1.015	1.022	1.129
<i>bituberculatus</i>	1.233	0.925	1.098	0.811	0.953	0.754	1.047	0.873	0.998	0.904	1.135	1.007	1.007	1.009	1.015	1.127
<i>depressus</i>	1.243	0.935	1.093	0.836	0.943	0.752	1.050	0.883	1.000	0.909	1.142	0.995	1.004	0.999	1.011	1.120
<i>fallax</i>	1.241	0.944	1.111	0.828	0.951	0.756	1.039	0.870	0.998	0.910	1.148	0.994	1.003	0.995	1.013	1.102
<i>laceratus</i>	1.201	0.949	1.081	0.817	0.955	0.750	1.058	0.888	0.996	0.900	1.138	0.999	1.005	0.996	1.009	1.122
<i>pallens</i>	1.239	0.945	1.102	0.823	0.965	0.745	1.033	0.873	0.996	0.933	1.155	1.007	1.000	1.019	1.011	1.156
<i>utete</i>	1.246	0.942	1.088	0.818	0.936	0.743	1.053	0.879	1.003	0.910	1.148	1.003	1.005	1.005	1.010	1.169

Appendix 2 - Table S1. Matrix of discrete and continuous characters used for the phylogenetic analysis (continued).

	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
<i>bonasus</i>	0.864	1.026	0.859	0.818	0.953	0.874	0.741	0.979	0.612	1.029	0.795	1.275	1.003	1.062	1.053	1.085
<i>acutus</i>	0.892	1.019	0.857	0.812	0.940	0.878	0.792	0.960	0.631	1.042	0.773	1.294	1.000	1.114	1.047	1.129
<i>bituberculatus</i>	0.882	1.019	0.866	0.819	0.939	0.872	0.759	0.944	0.640	1.061	0.776	1.295	1.008	1.108	1.051	1.125
<i>depressus</i>	0.872	1.009	0.867	0.829	0.940	0.884	0.753	0.951	0.640	1.041	0.773	1.300	0.997	1.108	1.043	1.124
<i>fallax</i>	0.861	1.011	0.856	0.831	0.938	0.871	0.760	0.962	0.645	1.052	0.779	1.306	1.003	1.119	1.047	1.132
<i>laceratus</i>	0.864	1.017	0.884	0.820	0.937	0.887	0.783	0.956	0.657	1.039	0.726	1.294	0.999	1.085	1.047	1.102
<i>pallens</i>	0.846	1.018	0.874	0.817	0.945	0.886	0.753	0.963	0.641	1.021	0.754	1.291	1.000	1.098	1.056	1.109
<i>utete</i>	0.857	1.021	0.880	0.818	0.949	0.878	0.750	0.963	0.653	1.036	0.765	1.281	0.994	1.086	1.052	1.101
	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
<i>bonasus</i>	1.093	1.114	1.120	1.138	1.168	1.096	1.212	1.050	1.243	1.027	1.246	0.978	1.248	0.925	1.245	0.875
<i>acutus</i>	1.087	1.144	1.118	1.152	1.164	1.109	1.198	1.055	1.216	1.014	1.227	0.962	1.225	0.909	1.223	0.859
<i>bituberculatus</i>	1.086	1.149	1.114	1.161	1.155	1.111	1.192	1.057	1.212	1.016	1.224	0.964	1.225	0.910	1.219	0.859
<i>depressus</i>	1.083	1.139	1.116	1.141	1.164	1.098	1.203	1.050	1.222	1.012	1.236	0.964	1.231	0.916	1.231	0.868
<i>fallax</i>	1.082	1.149	1.112	1.154	1.159	1.105	1.196	1.048	1.220	1.010	1.232	0.960	1.228	0.910	1.221	0.861
<i>laceratus</i>	1.085	1.128	1.114	1.147	1.167	1.114	1.202	1.060	1.227	1.024	1.237	0.973	1.234	0.919	1.233	0.867
<i>pallens</i>	1.095	1.139	1.127	1.154	1.172	1.106	1.206	1.052	1.224	1.013	1.232	0.964	1.223	0.914	1.219	0.866
<i>utete</i>	1.099	1.127	1.130	1.149	1.172	1.103	1.208	1.055	1.228	1.019	1.236	0.970	1.235	0.920	1.234	0.875
	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
<i>bonasus</i>	1.224	0.834	1.009	0.880	0.804	0.818	0.777	0.847	0.766	0.890	0.758	0.938	0.760	0.991	0.787	1.033
<i>acutus</i>	1.211	0.814	1.007	0.835	0.813	0.788	0.791	0.824	0.781	0.874	0.768	0.926	0.772	0.982	0.795	1.030
<i>bituberculatus</i>	1.218	0.811	1.007	0.819	0.807	0.783	0.790	0.824	0.785	0.875	0.769	0.928	0.774	0.984	0.795	1.034
<i>depressus</i>	1.227	0.825	1.014	0.838	0.800	0.801	0.786	0.838	0.774	0.882	0.763	0.929	0.771	0.981	0.794	1.027
<i>fallax</i>	1.206	0.818	1.006	0.827	0.810	0.788	0.792	0.826	0.778	0.872	0.769	0.923	0.775	0.977	0.801	1.025
<i>laceratus</i>	1.232	0.820	1.013	0.835	0.791	0.802	0.783	0.842	0.778	0.890	0.765	0.940	0.768	0.993	0.787	1.037
<i>pallens</i>	1.225	0.823	1.012	0.826	0.804	0.801	0.802	0.840	0.789	0.885	0.775	0.935	0.774	0.989	0.788	1.034
<i>utete</i>	1.216	0.836	1.012	0.836	0.806	0.807	0.783	0.840	0.772	0.885	0.762	0.936	0.767	0.990	0.787	1.035

Appendix 2 - Table S1. Matrix of discrete and continuous characters used for the phylogenetic analysis (continued).

	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112
<i>bonasus</i>	0.812	1.092	0.846	1.138	0.889	1.109	0.937	1.079	0.989	1.115	1.028	1.121	1.088	1.111	1.140	1.090
<i>acutus</i>	0.833	1.088	0.869	1.138	0.907	1.131	0.947	1.122	0.992	1.102	1.052	1.129	1.113	1.106	1.161	1.081
<i>bituberculatus</i>	0.830	1.093	0.871	1.140	0.912	1.130	0.954	1.118	0.986	1.127	1.057	1.149	1.116	1.120	1.158	1.086
<i>depressus</i>	0.830	1.083	0.866	1.132	0.905	1.128	0.944	1.115	0.988	1.104	1.048	1.134	1.109	1.110	1.158	1.084
<i>fallax</i>	0.837	1.087	0.867	1.143	0.908	1.140	0.949	1.127	0.986	1.120	1.052	1.145	1.113	1.115	1.162	1.087
<i>laceratus</i>	0.822	1.088	0.864	1.125	0.906	1.116	0.944	1.094	0.983	1.120	1.050	1.156	1.108	1.123	1.154	1.092
<i>pallens</i>	0.817	1.089	0.841	1.141	0.886	1.123	0.934	1.100	0.996	1.108	1.044	1.126	1.105	1.109	1.155	1.090
<i>utete</i>	0.826	1.087	0.858	1.138	0.892	1.112	0.932	1.092	0.991	1.119	1.044	1.132	1.104	1.117	1.151	1.091
	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128
<i>bonasus</i>	1.189	1.059	1.226	1.016	1.259	0.980	1.282	0.939	1.290	0.900	1.283	0.862	0.745	0.826	0.732	0.859
<i>acutus</i>	1.202	1.049	1.233	1.010	1.264	0.983	1.280	0.949	1.275	0.912	1.262	0.874	0.762	0.830	0.743	0.868
<i>bituberculatus</i>	1.198	1.050	1.231	1.012	1.256	0.978	1.268	0.936	1.265	0.893	1.253	0.852	0.769	0.814	0.752	0.851
<i>depressus</i>	1.204	1.055	1.239	1.018	1.265	0.985	1.278	0.946	1.265	0.901	1.254	0.853	0.771	0.812	0.756	0.859
<i>fallax</i>	1.203	1.053	1.234	1.011	1.258	0.976	1.272	0.937	1.266	0.897	1.252	0.857	0.773	0.823	0.752	0.857
<i>laceratus</i>	1.198	1.059	1.228	1.015	1.250	0.976	1.264	0.929	1.268	0.883	1.261	0.838	0.768	0.805	0.755	0.847
<i>pallens</i>	1.200	1.061	1.236	1.025	1.261	0.991	1.270	0.946	1.268	0.898	1.259	0.852	0.752	0.813	0.740	0.854
<i>utete</i>	1.193	1.057	1.228	1.016	1.255	0.979	1.273	0.938	1.273	0.896	1.267	0.855	0.753	0.812	0.742	0.851
	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144
<i>bonasus</i>	0.731	0.895	0.747	0.938	0.771	0.978	0.805	1.031	0.851	1.068	0.897	1.098	0.947	1.116	0.706	1.266
<i>acutus</i>	0.727	0.903	0.738	0.939	0.761	0.973	0.795	1.019	0.834	1.060	0.878	1.093	0.928	1.121	0.707	1.240
<i>bituberculatus</i>	0.744	0.890	0.753	0.933	0.769	0.974	0.799	1.024	0.834	1.068	0.873	1.105	0.921	1.138	0.704	1.236
<i>depressus</i>	0.736	0.902	0.741	0.944	0.760	0.981	0.793	1.028	0.831	1.067	0.877	1.095	0.927	1.123	0.720	1.235
<i>fallax</i>	0.739	0.892	0.750	0.932	0.766	0.972	0.795	1.023	0.831	1.066	0.874	1.101	0.921	1.136	0.717	1.238
<i>laceratus</i>	0.751	0.890	0.759	0.935	0.777	0.976	0.801	1.030	0.835	1.073	0.875	1.108	0.917	1.145	0.694	1.222
<i>pallens</i>	0.733	0.896	0.745	0.939	0.767	0.979	0.801	1.029	0.842	1.067	0.887	1.097	0.938	1.119	0.688	1.203
<i>utete</i>	0.739	0.891	0.752	0.936	0.771	0.979	0.801	1.032	0.842	1.072	0.884	1.104	0.937	1.123	0.681	1.191

Appendix 2 - Table S1. Matrix of discrete and continuous characters used for the phylogenetic analysis (continued).

	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
<i>bonasus</i>	0.941	1.239	1.000	1.320	1.030	1.238	1.128	1.149	1.199	1.050	1.187	0.933	1.169	0.809	1.046	0.720
<i>acutus</i>	0.940	1.245	0.993	1.316	1.043	1.260	1.136	1.179	1.178	1.051	1.196	0.916	1.158	0.790	1.040	0.704
<i>bituberculatus</i>	0.944	1.256	0.992	1.309	1.046	1.263	1.129	1.173	1.180	1.048	1.196	0.917	1.164	0.792	1.041	0.712
<i>depressus</i>	0.939	1.252	0.992	1.310	1.043	1.262	1.131	1.176	1.183	1.053	1.197	0.921	1.160	0.794	1.038	0.708
<i>fallax</i>	0.945	1.249	0.999	1.313	1.043	1.258	1.128	1.176	1.175	1.056	1.187	0.926	1.162	0.797	1.046	0.702
<i>laceratus</i>	0.946	1.251	0.991	1.307	1.041	1.253	1.134	1.166	1.193	1.049	1.203	0.922	1.179	0.799	1.048	0.724
<i>pallens</i>	0.974	1.246	1.005	1.324	1.051	1.256	1.137	1.169	1.194	1.058	1.191	0.935	1.149	0.813	1.029	0.723
<i>utete</i>	0.971	1.230	1.021	1.330	1.063	1.262	1.138	1.175	1.186	1.063	1.181	0.939	1.150	0.815	1.032	0.720
	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176
<i>bonasus</i>	0.884	0.658	0.710	0.617	0.805	1.177	0.954	1.220	1.060	1.263	1.162	1.348	1.191	1.208	1.197	1.094
<i>acutus</i>	0.888	0.659	0.721	0.640	0.808	1.212	0.947	1.241	1.061	1.277	1.142	1.332	1.174	1.195	1.180	1.080
<i>bituberculatus</i>	0.887	0.656	0.716	0.639	0.808	1.214	0.955	1.241	1.058	1.280	1.141	1.324	1.173	1.195	1.180	1.083
<i>depressus</i>	0.882	0.659	0.715	0.629	0.811	1.213	0.957	1.240	1.064	1.270	1.146	1.336	1.174	1.197	1.177	1.084
<i>fallax</i>	0.887	0.651	0.710	0.634	0.807	1.223	0.941	1.238	1.056	1.277	1.144	1.332	1.171	1.191	1.178	1.074
<i>laceratus</i>	0.878	0.671	0.692	0.637	0.806	1.202	0.938	1.228	1.061	1.273	1.157	1.335	1.183	1.199	1.190	1.084
<i>pallens</i>	0.877	0.656	0.706	0.618	0.821	1.224	0.956	1.248	1.056	1.288	1.126	1.326	1.168	1.198	1.171	1.082
<i>utete</i>	0.875	0.659	0.702	0.614	0.828	1.222	0.951	1.249	1.050	1.288	1.125	1.338	1.166	1.200	1.174	1.080
	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192
<i>bonasus</i>	1.178	0.978	1.142	0.865	1.081	0.756	0.972	0.691	0.823	0.662	0.815	0.789	0.812	0.913	0.806	1.036
<i>acutus</i>	1.171	0.962	1.138	0.850	1.078	0.744	0.979	0.678	0.846	0.648	0.834	0.791	0.826	0.929	0.818	1.063
<i>bituberculatus</i>	1.172	0.967	1.136	0.855	1.078	0.747	0.975	0.679	0.840	0.638	0.836	0.786	0.829	0.928	0.819	1.064
<i>depressus</i>	1.163	0.968	1.139	0.856	1.074	0.755	0.973	0.682	0.843	0.635	0.834	0.782	0.827	0.923	0.817	1.059
<i>fallax</i>	1.167	0.956	1.141	0.844	1.082	0.742	0.983	0.678	0.851	0.648	0.838	0.794	0.825	0.934	0.815	1.070
<i>laceratus</i>	1.171	0.969	1.138	0.857	1.076	0.752	0.977	0.683	0.844	0.651	0.826	0.789	0.820	0.924	0.812	1.054
<i>pallens</i>	1.161	0.960	1.130	0.844	1.070	0.735	0.977	0.665	0.851	0.637	0.844	0.788	0.838	0.933	0.830	1.072
<i>utete</i>	1.162	0.957	1.126	0.840	1.064	0.730	0.977	0.659	0.856	0.645	0.843	0.791	0.841	0.933	0.837	1.070

Appendix 3 - Species Distribution

List of the localities employed in biogeographical analysis, and the literature references of each species.

Hamonthophagus acutus (d'Orbigny, 1908)

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d'Orbigny, 1908: 617; Kolbe, 1908: 129; d'Orbigny, 1913b: 471, 696; Ferreira, 1958b: 510;

Ferreira, 1968-69: 556.

Type material. BOTSWANA: lake Ngami. DEMOCRATIC REPUBLIC OF CONGO: [Tanganyika,] région de Mpala. MALAWI: Malawi Lake [= Nyassa]. NAMIBIA: [Sud-Ouest africain allemand] Okahandja; Salem. SOUTH AFRICA: ["Cafrerie" = Caffraria] Eastern Cape province.

Examined material. BOTSWANA: Aoub-Nossob Junction [Nossob river Kalahari]; Cheleka Kalahari Gemsbok Park; Cheleka Waterhole Nossob river; Drotsky's Cave Ngamiland; Okavango Boro river; Shikaue Bechuanaland. NAMIBIA: Gobabeb Kuiseb River; Otjikoko; Voigtsgrund; Kasandya; Rehoboth; Etosha NP; Gobabeb Game Reserve; Gobabis; Gochas; Great Karas Mountains [Karasberge Farm Noachabib]; Karibib; Karibib District 47 km S Wilhelmstal Okandoukaselibe; Keetmans district 1 kmW Mata Mata Welverdiend farm; Kuiseb river [Walvis Bay = Walfisch bay]; Kuzikus Wildlife Reserve; Maltahohe; Omandumba Farm W Damaraland; Omaruru Epako lodge; Stampriet Duinveld; Namib Bloedkoppe; Namib Ganab water; Namib Tinkas Dam; Swakopmund Damaraland; Windhoek; Windhoek Farm Oijtseyo; Witvlei 80 km E Windhoek. SOUTH AFRICA: Kalahari Park Farm Mara; Northern Cape

between Putsonderwater & Kenhardt Bushmanland; Northern Cape Kalahari Gemsbok Park Twee Rivieren; Northern Cape Province Tswalu Natural Reserve; Northern Cape Rietfontein; Northern Cape Upington; [Two River] Kalahari Gemsbok Park [=Kgalagadi Transfrontier Park]; Mata Mata Kalahari Park.

Literature data. BOTSWANA: Lago N’Gami [Ferreira 1968-69:556]; Shikane [Ferreira 1968-69:556]. DEMOCRATIC REPUBLIC OF CONGO: Mpala [Ferreira 1968-69:556]. NAMIBIA: Great Namaqualand [Ferreira 1958b:510]; Rooibank [Ferreira 1968-69:556]; Okahandja, Salem [Ferreira 1968-69:556]; Windhoek, Omandumba [Ferreira 1968-69:556]. SOUTH AFRICA: Twee Rivieren, Kalahari Gemsbok Park XI.1950 [Ferreira 1958b:510]; Addo I.1951 [Ferreira 1958b:510]; Obobogorop, 120 miles NW Upington XI.1950 [Ferreira 1958b:510]; Elandshoek [Ferreira 1968-69:556]; entre Putsonderwater e Kenhardt [Ferreira 1968-69:556].

***Hamonthophagus bituberculatus* (Olivier, 1789)**

Ent., 1 (3):171

Boheman, 1860: 112; Harold, 1871b: 15; Kolbe, 1887: 247; Harold, 1880a: 154; Fairmaire, 1887: 114; Reitter, 1893: 182; Kolbe, 1897a: 151; d’Orbigny, 1898a: 206; d’Orbigny, 1904a: 308; Kolbe, 1905: 516; Brenske, Ohaus & d’Orbigny, 1906: 6; d’Orbigny, 1908: 171; d’Orbigny, 1908: 617; d’Orbigny 1909b: 525; d’Orbigny, 1911: 21; d’Orbigny, 1913a: 117; d’Orbigny, 1913b: 470,696; Kolbe, 1914: 299; Schatzmayr, 1946: 48; Villiers, 1950: 222; Janssens, 1953c: 1549; Ferreira, 1959: 83; Frey, 1961b: 72; Ferreira, 1968-69: 580; Balthasar, 1969: 65; Frey & Villiers, 1971: 144; Balthasar, 1972: 22; Cambefort, 1972: 249; Alfieri, 1976: 205; Endrödi, 1976: 157; Paulian, 1980: 153; Walter & Cambefort, 1980: 71; Zunino, 1981: 412; Cambefort, 1982: 456; Paulian & Cambefort, 1982: 161; Cambefort, 1984: 131; Baraud, 1985: 286; Walter, 1993: 128; Moretto (in Moretto & Bordat, 2006): 123.

Type material. SENEGAL.

Examined material. BENIN: Dahomey; Attogon (Nyaouli); Bohiars; Borgou Wari-Marou; Kotonou; Moyen Dahomey Plateau de Gabuanado. BURKINA FASO: Boundigui; Dori N'Diomga W Essakane Sahel; Faso Dori river Varrage. CENTRAL AFRICAN REPUBLIC Houbangui Bessou-Mission-a mont de Fort de Possel [Mission Chari-Ciad]. CHAD: Borkou region marécages de Tibui; Lake Chad Iba island; N'Gouri [=N'goumi pres du lac Chad]; N'Gouri district of Kanem; Chad rive SE Lake Chad [Mission Tiho Boè]; Sitia [Tchad Sitje riv sud lac Tchad]; Tihelle Moundou. REPUBLIC OF CONGO: Anneaud De Saturne (près Pkrouge = Ignè - Ignè - dpt. Pool); Goma (=Ngoma [L'Goma]) Parc nat du Konquati; Hinda Kwilu; Klintele; Kouilou Nda stream; Loufula I; Malélé Kouilou province; Mossandjo [=Mosandjoko]; Pool region Kintélé; Pool region Voka; Trou de Dieu. DEMOCRATIC REPUBLIC OF CONGO: Bandundu Gungu; Bandundu province Kikwit; Bandundu region Ipamu Kasai river; Bandundu region Ipamu; Foret de Kawa lac Albert [Kawa = Kivu]; Ounyoro Region de L'Albert Nyanza Boutiaba; Imbalela; Inongo (Kwango); Kenge (Pont Bukali); Kinshasa [=Leopoldville] province; km 27 Kenge-Kinshasa; Menkao Plateau Batèkè; Moussaka [Rep of Congo Mossaka];Mpoiè. EGYPT: Le Caire H. ERITREA: Ghinda; Keren [=Cheren]. ETHIOPIA: Rahad river [Afluent du Nil Blu]; Shoa province, Lake Langano. GABON: Dièrè [Dièlè]. GAMBIA: Bathurst = Banjul. GHANA: Northern region, Tamale. GUINEA [Soudan Francese = Federazione del Mali] Reg de Kouroussa, Conakry. GUINEA BISSAU: Caravela island. IVORY COAST: [Africa occidentale El Fen dei kuste] Abidjan; Adiapo-Doume; Assinie; Bingerville; Boundiali M'Banto; Port Bouet; Touba [die' Masso-Dolla]. KENYA: Meru district Gatunga; Luitpoldkette [Loita Hills SW Kenia Rift Valley]. MALAWI:

Nyassaland. MAURITANIA: Bogue [=Boghy]; Nouakchott; Rosso; Vogle. NIGER: Niamey env.; Mazabi; région du Tillabéri. NIGERIA: Calabar; Lame Burra Game Reserve; old Calah = Calabar. SENEGAL: Bambey [Pambey]; Casamance; Cayor Kingdom; Dakar Yoff Mission Catholique; Dakar; Deouroup; Dpt Rufisque region de Dakar Keur Massar cité Gendarmerie; Dpt Rufisque region de Dakar Rufisque Keur Ndiaye Lo; env. Ziguinchor (Casamance); Fatick [Douroup = Doudouf?] Sahel au limit du lagune; Malika; M'Bao; M'bour Sali Portudal; Nthiadaie; Ouakam; Parc du Delta du Saloum Reserve de Fachala; Parc zool de l'Hann, Dakar; Sangalkam; Séfa; St Louis Mboubène Peulh; Thiès Lac Tanmà; Ziguinchor. SUDAN: Soudan Egyptien province de Sennar; Blue Nile Wad Madani, Diebel [=Jebel] Marra Darfur; Disa; Ed Damer Hudeiba; env Khartoum; Province [North Darfur el Geneina] Al-Junaynah West Darfur; Sennar Blue Nile. TANZANIA: [?] Zanguebar [=Swahili coast] Mhonda Ouzigoua. TOGO: Atakpamé; Lama-Kara [=Lassahout]; Lomé; Tovégan; UGANDA: Entebbe environments.

Literature data. ARABIA [Paulian 1980:153]. BENIN: Vieux Calabar [Ferreira 1968-69:580]. CENTRAL AFRICAN REPUBLIC: Bayanga [Moretto 2010:459]. CHAD: arcipelago Kouri [Ferreira 1968-69:580]. DEMOCRATIC REPUBLIC OF CONGO: Kassi Garamba I.1951 [Frey 1961b:72]; Garamba entre Kilwa et Naworoko Plateau Bateke [Walter & Cambefort 1980:71]; Kinshasa [Walter 1993:138]. EGYPT: presso Il Cairo [Schatzmayr 1946:48]. ERITREA: Keren, Bogos, Adi Ugri [Ferreira 1968-69:580]. GAMBIA Bathurst [Ferreira 1968-69:580]. GHANA Tamale, Nabogo, Abuadi [Endrödi 1976:157]. GABON: Alto Lobaye [Ferreira 1968-69:580]. IVORY COAST: Bingerville I-XII.1961-1964 [Balthasar 1969:65]; Port Bouet VII.1962 [Balthasar 1969:65]; Lamto [Cambefort 1982:456]. MAURITANIA: Lycée Rosso, à la lampe,

XII.1963, I-II-VII.1964 [Cambefort 1972:249]; Toungen, bouse XII.1963 [Cambefort 1972:249]. SENEGAL: Dakar, Cayor, Dialakar, Kayes [Ferreira 1968-69: 580]; Niokolo Koba [Paulian & Cambefort 1982:161]; Moretto (in Moretto and Bordat 2007):123; Mboro X.61 X.67 [Frey and Villiers 1971:144]; Linguère IX.67 [Frey and Villiers 1971:144]; Dagana XI.67 [Frey and Villiers 1971:144]; Richard-Toll XII.60, XI.67 [Frey and Villiers 1971:144]; forage de Tessékéré IV.67 [Frey and Villiers 1971:144]; Saint Louis 1946 [Frey and Villiers 1971:144]. NIGER Niamey [Villiers 1950:222]; Tessaoua, reg de Zinder. Assinie [Ferreira 1968-69:580]. NIGERIA: Lagos, [Ferreira 1968-69:580]. SOUTH AFRICA: Cape Prov. Twee Rivieren ii.58 [Ferreira 1959:83]. SUDAN: Wadi Halfa IX.1962 [Balthasar 1972:22]; Shendi I.1962 [Balthasar 1972:22]; Blue Nile, Wad Medani XI.1962 [Balthasar 1972:22]; Kordofan, El Obeid I.1963 [Balthasar 1972:22]; Upper Nile Malakal I.1963 [Balthasar 1972:22]; Bahr-el-Ghazal Wau II.1963 [Balthasar 1972:22]; Equatoria, Juba II-III.1963 [Balthasar 1972:22]. TANZANIA: Kibanga [Ferreira 1968-69:580].

***Hamonthophagus depressus* (Harold, 1871)**

Coleopterologische Hefte, 8:116

d'Orbigny, 1902: 241; d'Orbigny, 1904a: 309; d'Orbigny, 1908: 171; d'Orbigny, 1908: 617; d'Orbigny, 1913b: 472,696; d'Orbigny, 1916: 14; Boucomont, 1932: 50; Boucomont, 1933: 18; Gomes Alves, 1950: 154; Ferreira, 1958: 511; Frey, 1960a: 247; Paulian, 1960: 23; Ferreira, 1963a: 715; Ferreira, 1967c: 517; Ferreira, 1968-69: 614; Endrödy-Younga, 1982: 22; Paulian, 1984(1986): 108

Type material. SOUTH AFRICA: Eastern Cape province [=Caffraria].

Examined material. ANGOLA: Muande south to Rocades [=Xangongo].

BOTSWANA: 10 km NE Martin's Drift; 5 km north Nata; Metsimaklaba [=

Metsemotlhaba river]; Moletse. BURUNDI: [Urundi] Bururi. DEMOCRATIC REPUBLIC OF CONGO: Kalemie [=Albertville Congo Belge]; Kivu province [Kavinmvira] Uvira. KENYA: CE Eastern Mwingi environments; Ikutha Kitui region; Sagara Hills Taita region. MALAWI 4 km S Kasungu. MOZAMBIQUE: Junction Komati & Sabi rivers P.E.A.; Sabie POA DGB; Chupanga near Chemba; Xai-Xai [= Vila-Joao-Belo]; Lourenco Marques. NAMIBIA: Damaral, Sesfontein 33km SE; Gobabis 90 km E; Kaokoland [Kaokoveld] Swartbooisdrift; Otjitambi. SOUTH AFRICA: Barberton; Africa Durban; Eastern Cape Port St. Johns; Free State, Maghaleen Farm Zastron District; Free State, Van Zyls Rust Kuruman District; Gauteng Hennops River Pretoria District; Gauteng Pretoria; Gauteng Roodeplaat Dam; Gauteng Roodeplaat farm Pretoria; Gauteng Tswaing; Kruger Nat Park Letaba restcamp; Kruger Nat Pk. Skukuza Sabie Farm; Kruger Nat. Pk. Pefurires camp; Kruger Nat. Pk. Punda Maria; Kruger Nat. Pk. Skukuza 1 km S; Kruger Nat. Pk. Skukuza fish trail; Kruger Nat. Pk. Skukuza res. Camp; KwaZuluNatal Hluhluwe Game Reserve; KwaZuluNatal Magudu SW; KwaZuluNatal St. Lucia [Estouway]; KwaZuluNatal Tongaat; Limpopo Combretum Park; Limpopo Groblersdal; Limpopo Marieps Mountain; Limpopo Nylsvley hill base; Limpopo Nylsvley Smith farm; Limpopo Ofcolaco Makuhutswe [=Makhutzi] River; Limpopo Ofcolaco; Limpopo Rhenosterpoort farm near Jan Trichards pass; Limpopo Tzaneen; Lowveld Pafuri Kruger Nat Park; Mpumalanga Elandshoek; Mpumalanga Ezemvelo; Mpumalanga Helena Farm; Mpumalanga Komatipoort; Mpumalanga Nwaswitsaka Reserve; Mpumalanga Steelpoort Didingwe lodge; Mpumalanga SW of Komatipoort; Mpumalanga, Nylsvley Farm Sericea; N Zululand Ndumu Store; N. Province [= Limpopo Province] Blouberg; Natal Byrrihidovale Port Natal [=Durban]; Natal Durban; Natal Louwsburg Itala Game

Reserve; Natal Mkuze NP; North West Province 20 km W of Bothaville
 Klerksdoorpvaal river [= Klerksdorp Vaal River North West Province]; Northern
 Province [= Limpopo Province] Messina Natural Reserve; P.P. Rust Potgietersrus;
 Phalaborwa NE Tvl [= Limpopo Province]; S. Transvaal RobertsDrift Vaal River;
 Transkei Dwesa coast; Transvaal [= Limpopo Province] Zoutpansberg; Umfolozi GR
 Natal; Waterberg farm; Waterberg Geelhoutbush farm; Western Cape Villiersdorp.
 TANZANIA: Madibira og; Tanganjka Kilimanjaro Marangu. ZAMBIA: Mnkande; SW
 100 km E Livingstone; SW 20 km NW Kazangula. ZIMBABWE: [Guy Babault]
 Victoria Falls Zambesi [Rhodesia]; Chibhu [Chivhu] midlands; Chimanimani;
 Masvingo province 95km NE Beitbridge Bubi river; Matabele south 55 km NE
 Beitbridge Bubi River; Mount Selinda; Zambese Chemba; Zambese foret di Nakoro;
 NE Umg Kotwa broken Kauswi.

Literature data. MADAGASCAR: [Paulian 1960:23]. MAURITIUS: [Paulian
 1960:23]. MOZAMBIQUE Nova Chupanga [Ferreira 1963a:715]; Ponta de Ouro
 IV.1950 [Ferreira 1967c:517]; Vila Luisa III.1953 [Ferreira 1967c:517]; Moamba
 XI.1965 [Ferreira 1967c:517]; Chimonso V.1966 [Ferreira 1967c:517]; Selumane 1955
 [Ferreira 1967c:517]; Derre VII.1957 [Ferreira 1967c:517]; Matola Rio XII.1967
 [Ferreira, 1967c:517]. SOUTH AFRICA: Transvaal Blouberg Leipsig M. S. XI.1964
 [Ferreira 1958:511]; Kruger NP. Letaba Camp V.1951 [Ferreira 1958:511]; Nylsvley
 Pr. Nat. Res. [Endrödy-Younga, 1982:22]. ZIMBABWE Salisbury, Victoria Falls
 [Ferreira 1968-69:614].

***Hamonthophagus fallax* (d'Orbigny, 1913)**

Annl. Soc. ent. Fr., 82:471

Boucomont, 1925: 128; Paulian, 1937b: 30; Janssens, 1952: 31; Janssens, 1956: 350; Ferreira, 1962a: 45; Ferreira, 1962b: 171; Ferreira, 1965: 1168; Ferreira, 1968-69: 621.

Type material. MALAWI: Zomba, Shire river upper course, Malawi Lake [=Nyassa Zomba haut Chiré]. TANZANIA: [Afrique Or Alem] Dar-es-Salaam.

Examined material. BOTSWANA: [bor] Kasane; Sepupa. BURUNDI: Rusitzi [Ruzizi] delta. DEMOCRATIC REPUBLIC OF CONGO: Kalemie [=Albertville Congo Belge]; Kivu province [Kavinmvira] Uvira; Moba [= Baudouinville Katangua Congo Belge]; Tanganika-Moero district, lake Mweru Moba [Tanganika Moero Moba]; Dsch Ost Afrika. KENYA: Bura Taita region; Gatunga Meru district ; Ikutha Kitui region; Meru district (Malori) Mitunguu. MALAWI: Lake Chilwa shore; Salima Malawi lake shore; (Central) North Sanga Forest Reserve; (Southern) Nkopola forest reserve. NAMIBIA: Rundu distr. 120 km E Rundu. SOUTH AFRICA: Eastern Cape Graaf-Reinet. TANZANIA: Iringa province, Lit Ruaha Camp site; Iringa region, Ruaha Nat Park Tandala Camp; Iringa region, Wudzungwa Nat Park; Kigoma; Uluguru Mts. ZAMBIA: Kalabo; Kwando river [Rodèsia ouest Rivière Cuando]; Lealui [Rhodesia du Nord Haut Zambesi Lealui Vict]; Liua Plans.

Literature data. ANGOLA: [Paulian 1937:30]; Rio Cuando [Ferreira 1965:1168].

RUANDA-URUNDI: Usumbura [Janssens 1956:350].

***Hamonthophagus laceratus* (Gerstaecker, 1871)**

Arch. Naturgesch., 37(1):50

Gerstaecker, 1873: 132; Gerstaecker, 1884: 50; Fairmaire, 1887: 114; Kolbe, 1897a: 151; Kolbe, 1897b: 82; d'Orbigny, 1898: 206; d'Orbigny, 1902: 241; d'Orbigny, 1904a: 308; d'Orbigny, 1905b:

506; *d'Orbigny, 1908: 51; d'Orbigny, 1913a: 116; d'Orbigny, 1913b: 469,695; d'Orbigny, 1916: 13; Boucomont, 1923a: 11; Goidanich, 1928: 92; Boucomont, 1935: 285; Buxton, 1948: 344; Ferreira, 1967a: 115; Ferreira, 1968-69: 665; Balthasar, 1972: 20; Frey, 1972: 311; Carpaneto & Piattella, 1988: 271.*

Type material. TANZANIA: Zanzibar.

Examined material. BURUNDI: Deutch Ost Afrika [=Burundi Rwanda Tanganyka].

DEMOCRATIC REPUBLIC OF CONGO: Congo (river) Majidi; Congo [river?]

Katanga. ETHIOPIA: Caschei; Geweni [=Gewane] Hererge; Harrar Babile elephant

Sanctuary Harerge; Murle Omo; Musta Hill [Ogaden]; S Turmi; Ethiopie merid

Nanorogus bords du Lac Rodolph [= Lake Turkana, part in Ethiopia]. KENYA: [Côte

d'Afrique Orientale Anglaise] Ile de Mombasa; [Africa Orientale Anglaise] Voi Sagara

Region; [Côte d'Afrique orientale anglaise riviere] Ramisi; 20 km N Mombasa Serena

Beach hotel and environments; bord du lac Rodolph mont Lubur [Turkana Grits -

impreciso]; Bura; Malindi env.; Gede Forest; Kibongoto [=Kibonoto Kilimanjaro?];

Kibwesi forest; Ikutha; Lamu [=Africa Orientale Lamo formerly Sultanate of Zanzibar];

Lenterif Turkana; Malindi region, Watamu; Malindi; Meru district Malori (Mitunguu);

Mombasa; Murang'a [=British Oriental Africa Fort Hall]; Nguruman Escarpment;

Sagara Hills, Taita region; Samburu National Park; Sarova Salt Lick Game Lodge Taita

Hills; E Luitpoldkette [Loita Hills SW Kenia rift valley]; Shanzu Mombasa; Shimo La

Tewa; Tsavo Nat Park (E) Voi Mzinga Hills; Wura Taita Region. SOMALIA: near

Mogadiscio Omar Geb Geb [=Hammar Ger Geb] Somalia Benadir Region Mogadiscio;

Bihendula W Berbera; Daragodle; env. Mogadiscio; Guelidi [= Afgoi]; Hargeisa;

Chisimaio [=Kismayo]; Kisimajo [ora Kismayo, Basso Giuba]; Dolo; Merca. SUDAN:

Blue Nile Wad Madani. TANZANIA: [Africa Orient Allemande] Tanga; [Afrique

Orientale] Usambara Mountains Tangani; Africa orientale Iputa Mountain; Bagamoyo;

Dar es Salaam; Dodoma region, Magubike; Mhonda Ouzigoua; Morogoro region Savane de Mikesse Hills; Pangani (S Tanga); Pugu; Pwani region Dar-es-Salaam, Kalinze; Tamota Nguru Mts; Tanga region savane de Kisangiro [=Kisangire]; Nguru Mts M'begere forest; Zanguebar [=Swahili Coast].

Literature data. KENYA: Iago Rodolfo, Voi, Maji-Chumvi, Mombasa [Ferreira 1968-69:665]. SOMALIA: Egherta VII.1913 [Goidanich 1928:92]; Obbia, Gubbet, between Matagoi and Lugh, Gelidi [Ferreira 1968-69:665]; Adale 30,VIII.68 [Frey 1972:311]; Ola Uager [Frey 1972:311]; Hargeisa VI.1963 [Balthasar 1972:20]; Daragodleh VI.1963 [Balthasar 1972:20]. SOUTH AFRICA: Letaba Camp, Kruger NP XI.61 [Ferreira 1967a:115]. TANZANIA Mt. Meru, Kilimangiaro, Nguelo, Derema, Pangani, Mondha, Bagamoyo, Zanzibar [Ferreira 1968-69:665].

***Morettius pallens* (d'Orbigny, 1908)**

Annls Soc. ent. Fr., 77:172

d'Orbigny, 1913b: 468,695; Ferreira, 1968-69: 702; Balthasar, 1972: 22.

Type material. CHAD: Kiao-Kata, Moyen Chari, south to Chad lake

Examined material. CAMEROON: Pitoa; Benoue NP Bouffle Noir; Maroua. CHAD: Baghirmi Techkna, Chari-Baguirmi; Moundou. NIGERIA: Umudike. REPUBLIC OF CONGO: River Likouala. SUDAN: Province [North Darfur, el Geneina] Al-Junaynah West Darfur.

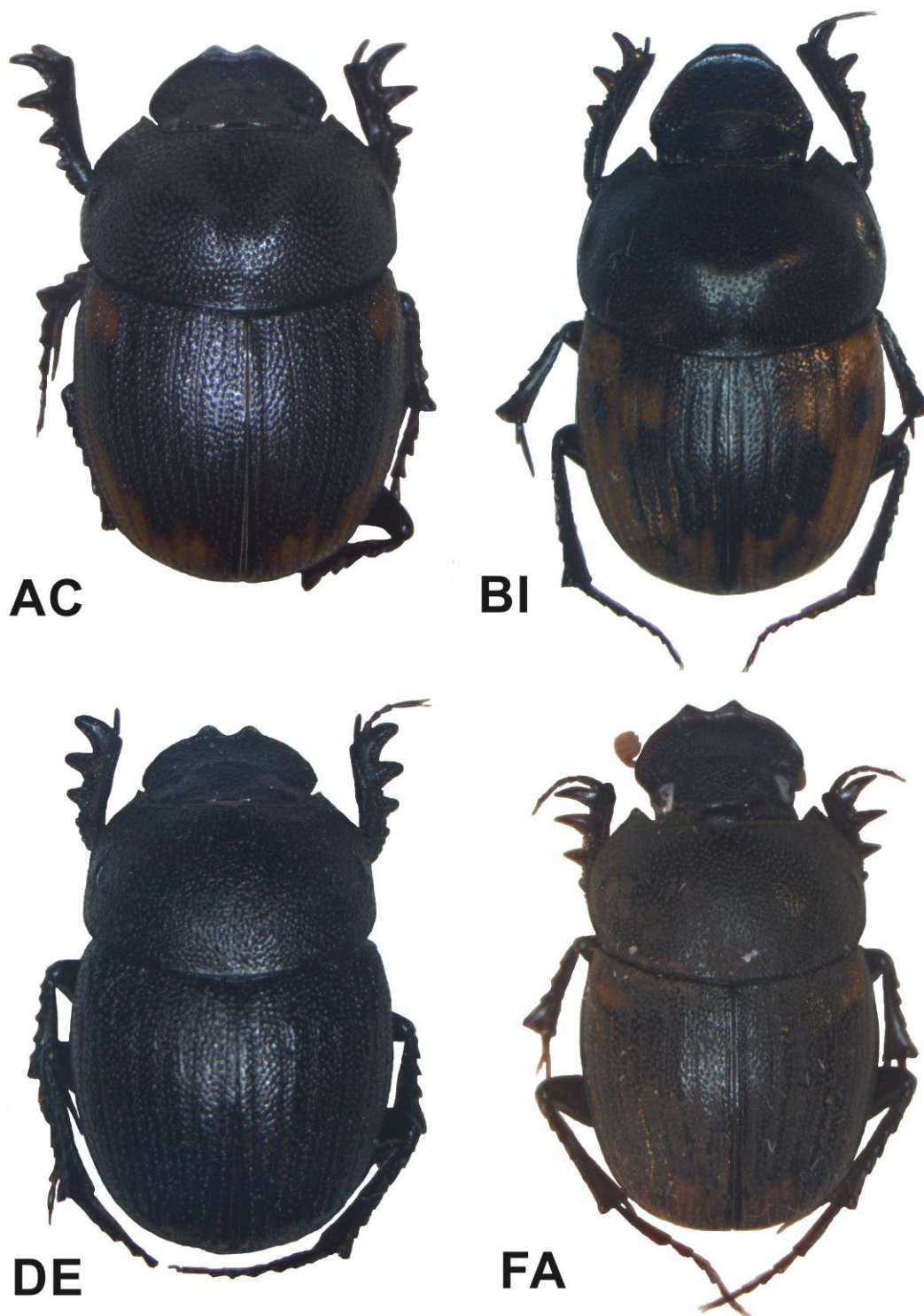
Literature data. CHAD: Kiao-Kata, Baghirmi [Ferreira 1968-69: 702]. REPUBLIC OF CONGO: Likouala [Ferreira 1968-69: 702]. SUDAN: Near Dibeira X.1962 [Balthasar 1972: 22]; Wadi Halfa IV.1964 [Balthasar 1972: 22].

***Morettius utete* sp. nov.**

Type material. TANZANIA: Eastern Utete-Rufiji-Kindwjiwi

Examined material. No other material is available.

Literature data. No literature data are available.



Appendix 4 - Figure S2. The habitus of *Hamonthophagus acutus* (AC), *H. bituberculatus* (BI), *H. depressus* (DE) and *H. fallax* (FA).



Appendix 4 - Figure S3. The habitus of *Hamonthophagus laceratus* (LA), *Morettius pallens* (PA) and *M. utete* (UT).