

APPENDIX

APPENDIX 1.1. A comprehensive list of the larks (Alaudidae) of the world based on taxonomy according to Sibley & Monroe (1990), Sinclair & Ryan (2003) and Hockey *et al.* (2005)

LIST OF LARKS OF THE WORLD

Family - *Alaudidae*

Genus - *Mirafra* (Horsfield, 1821)

1	Monotonous Lark	<i>Mirafra passerina</i> Gyldenstolpe, 1926
2	Singing Bushlark	<i>Mirafra cantillans</i> Blyth, 1844
3	Australasian Bushlark	<i>Mirafra javanica</i> Horsfield, 1821
4	Melodious Lark	<i>Mirafra cheniana</i> Smith, 1843
5	White-tailed Lark	<i>Mirafra albicauda</i> Reichenow, 1891
6	Madagascar Lark	<i>Mirafra hova</i> Hartlaub, 1860
7	Kordofan Lark	<i>Mirafra cordofanica</i> Strickland, 1850
8	Williams's Lark	<i>Mirafra williamsi</i> Macdonald, 1956
9	Friedmann's Lark	<i>Mirafra pulpa</i> Friedmann, 1930
10	Red-winged Lark	<i>Mirafra hypermetra</i> (Reichenow, 1879)*
11	Somali Lark	<i>Mirafra somalica</i> (Witherby, 1903)*
12	Ash's Lark	<i>Mirafra ashi</i> Colston, 1982*
13	Sharpe's Lark	<i>Mirafra sharpii</i> Elliot, 1897
14	Rufous-naped Lark	<i>Mirafra africana</i> Smith, 1836*
15	Angola Lark	<i>Mirafra angolensis</i> Barboza du Bocage, 1880
16	Flappet Lark	<i>Mirafra rufocinnamomea</i> (Salvadori, 1865)
17	Cape Clapper Lark	<i>Mirafra apiata</i> (Vieillot, 1816)*
18	Eastern Clapper Lark	<i>Mirafra fasciolata</i> Sundevall, 1850*
19	Collared Lark	<i>Mirafra collaris</i> Sharpe, 1896
20	Indian Lark	<i>Mirafra erythroptera</i> Blyth, 1845
21	Rufous-winged Lark	<i>Mirafra assamica</i> Horsfield, 1840
22	Indochinese Bushlark	<i>Mirafra erythrocephala</i> Salvadori & Giglioli, 1885
23	Degodi Lark	<i>Mirafra degodiensis</i> Erard, 1975
24	Burmese Bushlark	<i>Mirafra microptera</i> Hume, 1873
25	Jerdon's Bushlark	<i>Mirafra affinis</i> Blyth, 1845
26	Rusty Lark	<i>Mirafra rufa</i> Lynes, 1920
27	Gillett's Lark	<i>Mirafra gilletti</i> Sharpe, 1895
28	Malbrant's Lark	<i>Mirafra malbranti</i>

Note: Species marked with an asterisk have been placed under a separate genus *Corypha* by certain authors.

Genus - *Heteromiraфра* (Grant, 1913)

29	Archer's Lark	<i>Heteromiraфра archeri</i> Clarke, 1920
30	Sidamo Lark	<i>Heteromiraфра sidamoensis</i> Erard, 1975
31	Rudd's Lark	<i>Heteromiraфра ruddi</i> (Grant, 1908)

List of Larks of the world continued.

Genus - *Calendulauda* (Blyth, 1855)

32	Sabota Lark	<i>Calendulauda sabota</i> Smith, 1836
33	Fawn-coloured Lark	<i>Calendulauda africanoides</i> Smith, 1836
34	Red Lark	<i>Calendulauda burra</i> (Bangs, 1930)
35	Karoo Lark	<i>Calendulauda albescens</i> (Lafresnaye, 1839)
36	Dune Lark	<i>Calendulauda erythrochlamys</i> (Strickland, 1853)
37	Barlow's Lark	<i>Calendulauda barlowi</i> (Roberts, 1937)
38	Abyssinian Lark	<i>Calendulauda alopex</i> Sharpe, 1890
39	Pink-breasted Lark	<i>Calendulauda poecilosterna</i> (Reichenow, 1879)

Genus - *Pinarocorys* (Shelley 1902)

40	Rufous-rumped Lark	<i>Pinarocorys erythropygia</i> (Strickland, 1852)
41	Dusky Lark	<i>Pinarocorys nigricans</i> (Sundevall, 1850)

Genus - *Ammomanopsis* (Bianchi, 1905)

42	Gray's Lark	<i>Ammomanopsis grayi</i> (Wahlberg, 1855)
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Genus - *Chersomanes* (Cabanis, 1851)

43	Spike-heeled Lark	<i>Chersomanes albofasciata</i> (Lafresnaye, 1836)
44	Beesley's Lark	<i>Chersomanes beesleyi</i>

Genus - *Certhilauda* (Swainson, 1827)

45	Cape Long-billed Lark	<i>Certhilauda curvirostris</i> (Hermann, 1783)
46	Agulhas Long-billed Lark	<i>Certhilauda brevirostris</i> Roberts, 1941
47	Benguela Long-billed Lark	<i>Certhilauda benguelensis</i> (Sharpe, 1904)
48	Eastern Long-billed Lark	<i>Certhilauda semitorquata</i> Smith, 1836
49	Karoo Long-billed Lark	<i>Certhilauda subcoronata</i> Smith, 1843
50	Short-clawed Lark	<i>Certhilauda chuana</i> (Smith, 1836)

Genus - *Eremopterix* (Kaup 1836)

51	Chestnut-backed Sparrow-lark	<i>Eremopterix leucotis</i> (Stanley, 1814)
52	Black-eared Sparrow-lark	<i>Eremopterix australis</i> (Smith, 1836)
53	Grey-backed Sparrow-lark	<i>Eremopterix verticalis</i> (Smith, 1836)
54	Fischer's Sparrow-lark	<i>Eremopterix leucopareia</i> (Fischer & Reichenow, 1884)
55	Chestnut-headed Sparrow-lark	<i>Eremopterix signatus</i> (Oustalet, 1886)
56	Black-crowned Sparrow-lark	<i>Eremopterix nigriceps</i> (Gould, 1841)
57	Ashy-crowned Sparrow-lark	<i>Eremopterix griseus</i> (Scopoli, 1786)

List of Larks of the world continued.

Genus - *Calandrella* (Kaup, 1929)

58	Greater Short-toed Lark	<i>Calandrella brachydactyla</i> (Leisler, 1814)
59	Blanford's Lark	<i>Calandrella blanfordi</i> (Shelley, 1902)
60	Red-capped Lark	<i>Calandrella cinerea</i> (Gmelin, 1789)
61	Hume's Lark	<i>Calandrella acutirostris</i> Hume, 1873
62	Lesser Short-toed Lark	<i>Calandrella rufescens</i> (Vieillot, 1820)*
63	Asian Short-toed Lark	<i>Calandrella cheleensis</i> (Swinhoe, 1871)
64	Indian Short-toed Lark	<i>Calandrella raytal</i> (Blyth, 1844)*
65	Athi Short-toed Lark	<i>Calandrella athensis</i> (Sharpe, 1900)
66	Erlanger's Lark	<i>Calandrella erlangeri</i> (Neumann, 1906)
67	Somali Short-toed Lark	<i>Calandrella somalica</i> (Sharpe, 1895)

Note: Species marked with an asterisk have been placed under a separate genus *Alaudula* by certain authors.

Genus - *Spizocorys* (Sundevall, 1872)

68	Stark's Lark	<i>Spizocorys starki</i> Shelley, 1902
69	Pink-billed Lark	<i>Spizocorys conirostris</i> (Sundevall, 1850)
70	Sclater's Lark	<i>Spizocorys sclateri</i> (Shelley, 1902)
71	Obbia Lark	<i>Spizocorys obbiensis</i> Witherby, 1905
72	Masked Lark	<i>Spizocorys personata</i> Sharpe, 1895
73	Botha's Lark	<i>Spizocorys fringillaris</i> (Sundevall, 1850)

Genus - *Galerida* (Boie, 1828)

74	Crested Lark	<i>Galerida cristata</i> (Linnaeus, 1758)
75	Thekla Lark	<i>Galerida theklae</i> (Brehm, 1858)
76	Malabar Lark	<i>Galerida malabarica</i> (Scopoli, 1786)
77	Tawny Lark	<i>Galerida deva</i> (Sykes, 1832)
78	Sun Lark	<i>Galerida modesta</i> Heuglin, 1864
79	Large-billed Lark	<i>Galerida magnirostris</i> (Stephens, 1826)

Genus - *Eremophila* (Boie, 1828)

80	Horned Lark	<i>Eremophila alpestris</i> (Linnaeus, 1758)
81	Temminck's Horned Lark	<i>Eremophila bilopha</i> (Temminck, 1823)

Genus - *Alaemon* (Keyserling & Blasius, 1840)

82	Greater Hoopoe-lark	<i>Alaemon alaudipes</i> (Desfontaines, 1789)
83	Lesser Hoopoe-lark	<i>Alaemon hamertoni</i> Witherby, 1905

Genus - *Rhamphocoris* (Bonaparte, 1850)

84 Thick-billed Lark *Rhamphocoris clot-bey* (Bonaparte, 1850)

List of Larks of the world continued.

Genus - *Melanocorypha* (Boie, 1828)

85 Calandra Lark *Melanocorypha calandra* (Linnaeus, 1766)
86 Bimaculated Lark *Melanocorypha bimaculata* (Ménétries, 1832)
87 Tibetan Lark *Melanocorypha maxima* Blyth, 1867
88 Mongolian Lark *Melanocorypha mongolica* (Pallas, 1776)
89 White-winged Lark *Melanocorypha leucoptera* (Pallas, 1811)
90 Black Lark *Melanocorypha yeltoniensis* (Forster, 1767)

Genus - *Ammomanes* (Cabanis, 1851)

91 Bar-tailed Lark *Ammomanes cinctura* (Gould, 1841)
92 Rufous-tailed Lark *Ammomanes phoenicura* (Franklin, 1831)
93 Desert Lark *Ammomanes deserti* (Lichtenstein, 1823)

Genus - *Eremalauda* (Sclater, 1926)

94 Dunn's Lark *Eremalauda dunni* (Shelley, 1904)

Genus - *Chersophilus* (Sharp, 1890)

95 Dupont's Lark *Chersophilus duponti* (Vieillot, 1820)

Genus - *Pseudalaemon* (Lort Phillips, 1898)

96 Short-tailed Lark *Pseudalaemon fremantlii* (Lort Phillips, 1897)

Genus - *Lullula* (Kaup, 1829)

97 Wood Lark *Lullula arborea* (Linnaeus, 1758)

Genus - *Alauda* (Linnaeus, 1758)

98 Eurasian Skylark *Alauda arvensis* Linnaeus, 1758
99 Japanese Skylark *Alauda japonica* Temminck & Schlegel, 1848
100 Oriental Skylark *Alauda gulgula* Franklin, 1831
101 Raso Lark *Alauda razae* (Alexander, 1898)

APPENDIX 2.1. Nucleotide sequences of 530 base pairs of the mitochondrial Cytochrome *b* gene of Short-clawed Larks from the eastern (1E-6E) and western population (1W-6W) aligned with those of outgroups; Rufous-naped Lark *Mirafra africana* (1R & 2R) and Spike-heeled Lark *Chersomanes albobasciata* 1S-3S. Dots indicate identity to the 1E sequence. These sequences correspond to locations on the chicken (*Gallus*) sequence (Desjarins & Morais 1990) of the 3' end of the primer sequence.

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	1	2	3	4	5]	
[1234567890	1234567890	1234567890	1234567890	1234567890	[
1E	CCTGATTCGTGGAGGAGGGTGAGGTGTACTAGTGTGAGGCCTGCGATTAG					[50]
2E	.....					[50]
3E	.....					[50]
4E	.....					[50]
5E	.....					[50]
6E	.....					[50]
1W	.....					[50]
2W	.....					[50]
3W	.....					[50]
4W	.....					[50]
5W	.....					[50]
6W	.....					[50]
1R	.....A.....A..G.....A..A..G..A					[50]
2R	NNNNNNNNNNNNNNNNNN.....A..G.....CA..A..G..A					[50]
1S	.....A.....G.....A..T.....G..					[50]
2S	.....A..A.....G.....A..T.....G..					[50]
3S	NNNNNNNNNNNNNNNNNN.....A..T.....G..					[50]
1E	GAATGGGAGTAGGAAATGAAGGGTGAAGAATCGGGTGAGAGTAGGGTTGT					[100]
2E	.....					[100]
3E	.....					[100]
4E	.....					[100]
5E	.....					[100]
6E	.....					[100]
1W	.....					[100]
2W	.....					[100]
3W	.....					[100]
4W	.....					[100]
5W	.....					[100]
6W	.....					[100]
1R	.....T..AG.....G..G.....T..A.....G.....					[100]
2R	.....T..AG.....G..G.....T..A.....G.....					[100]
1S	.....A..G.....G..G..T..CA.....G..G.....					[100]
2S	.....A..G.....G..G..T..CA.....G..G.....					[100]
3S	.....A..G.....G..G..T..CA.....G..G.....					[100]
1E	CTACTGAGAATCCCCCCCACGCTCATTCTACTAGGGTCTGGCCGACATAG					[150]
2E	.....					[150]
3E	.....					[150]
4E	.....					[150]
5E	.....					[150]

6E	.....	[150]
1W	.....	[150]
2W	.....	[150]
3W	.....	[150]
4W	.....	[150]
5W	.....	[150]
6W	.....	[150]
1R	.....G..T..T..TA.....C.....T.....T...T	[150]
2R	.....G..T..T..TA.....C.....T.....T...T	[150]
1S	.....C..A..C.....T.....T.....T	[150]
2S	.....C..A..C.....T.....T.....T	[150]
3S	.....C..A..C..T.....T.....T	[150]

1E	GGAATGGCTGAGAGTAAGTTTGTGATTACTGTAGCCCCCAGAGGATAT	[200]
2E	.....	[200]
3E	.....	[200]
4E	.....	[200]
5E	.....	[200]
6E	.....	[200]
1W	.....	[200]
2W	.....	[200]
3W	.....	[200]
4W	.....	[200]
5W	.....	[200]
6W	.....	[200]
1R	..G..T.....C..G.....G..G.....T.....	[200]
2R	..G..T.....C..G.....G..G.....T.....	[200]
1S	..G.....A..G.....G.....	[200]
2S	..G.....A..G.....G.....	[200]
3S	..G.....A..G.....G.....	[200]

1E	TTGTCCTCAGGGGAGGACATATCCTACGAAAGCGGTGGCCATGAGTAGTA	[250]
2E	.....	[250]
3E	.....	[250]
4E	.....	[250]
5E	.....	[250]
6E	.....	[250]
1W	.....	[250]
2W	.....	[250]
3W	.....	[250]
4W	.....	[250]
5W	.....	[250]
6W	.....	[250]
1R	.....T.....G.....A..G..T..T..T....GGC..	[250]
2R	.....T.....G.....A..G..T..T..T....GGC..	[250]
1S	.....A.....G.....G.....T.....GGC..	[250]
2S	.....A.....G.....G.....T.....GGC..	[250]
3S	.....A.....G.....G.....T.....GGC..	[250]

1E	GGAGGAGGATAATTCCTACGTTTCAGGTTTCTTTGTTTAGGTATGAGCCG	[300]
2E	.....	[300]
3E	.....	[300]
4E	.....	[300]
5E	.....	[300]
6E	.....	[300]
1W	.....	[300]
2W	.....	[300]
3W	.....	[300]
4W	.....	[300]
5W	.....	[300]

6W [300]
 1RG..C..A.....C.....C..... [300]
 2RG..C..A.....C.....C..... [300]
 1S .A.....C.....G..A... [300]
 2S .A.....C.....G..A... [300]
 3S .A.....C.....G..A... [300]

1E TAGTAAAGTCCTCGACCAATGTGGAGATAGATGCAGATGAAGAAGAGGGA [350]
 2E [350]
 3E [350]
 4E [350]
 5E [350]
 6E [350]
 1W [350]
 2W [350]
 3W [350]
 4W [350]
 5W [350]
 6W [350]
 1RG.T.....G..G.....AG.....A... [350]
 2RG.T.....G..G.....AG.....A... [350]
 1SG.T.....G..G..A..A..G.....T.... [350]
 2SG.T.....G..G..A..A..G.....T.... [350]
 3SG.T.....G..G..A..A..G.....T.... [350]

1E GGCTCCGTTTCGGTGGAGGTTTCGGATTAGTCAGCCGAATTGGACATCTC [400]
 2E [400]
 3E [400]
 4E [400]
 5E [400]
 6E [400]
 1W [400]
 2W [400]
 3W [400]
 4W [400]
 5W [400]
 6W [400]
 1R A..G.....T.....A.....C..G... [400]
 2R A..G.....T.....A.....C..G... [400]
 1S ...C..A..T.....G..G... [400]
 2S ...C..A..T.....G..G... [400]
 3S ...C..A..T.....G..G... [400]

1E GGCAGATGTGGGCAACGGAAGCAAAGGCTATAGAGGTGTCTGGTGTATAG [450]
 2E [450]
 3E [450]
 4E [450]
 5E [450]
 6E [450]
 1W [450]
 2W [450]
 3W [450]
 4W [450]
 5W [450]
 6W [450]
 1RT.....A.....GG.....C..G... [450]
 2RT.....A.....GG.....C..G... [450]
 1SG..T..G..G.....GG.....C..G... [450]
 2SG..T..G..G.....GG.....C..G... [450]
 3SG..T..G..G.....GG.....C..G... [450]

1E	TGTGTGGCTAGTAGGAGGCCTGTGATGATTTGTATGATCAGGCAGATGCC	[500]
2E	.....	[500]
3E	.....	[500]
4E	.....	[500]
5E	.....	[500]
6E	.....	[500]
1W	.....	[500]
2W	.....	[500]
3W	.....	[500]
4W	.....	[500]
5W	.....	[500]
6W	.....	[500]
1R	.....A.CA.....G...T.....	[500]
2R	.....A.CA.....G...T.....	[500]
1S	...A.....G..G.T.....	[500]
2S	...A.....G..G.T.....	[500]
3S	...A.....G..G.T.....	[500]

1E	TAGTAGGGATCCGAAATTCATCATGCTNN	[530]
2E	.....GA	[530]
3E	.....GA	[530]
4E	.....GA	[530]
5E	.....GA	[530]
6E	.....GA	[530]
1W	.....GA	[530]
2W	.....GA	[530]
3W	.....GA	[530]
4W	.....GA	[530]
5W	.....GA	[530]
6W	.....GA	[530]
1R	...A...G..A..G.....GA	[530]
2R	...A...G..A..G.....GA	[530]
1S	.....A..G.....GA	[530]
2S	.....A..G.....GA	[530]
3S	.....A..G.....GA	[530]

APPENDIX 2.2. Nucleotide sequences of 972 base pairs of the mitochondrial ND2 gene of Short-clawed Larks from the eastern population (1E-6E) and western population (1W-6W) aligned with that of outgroups; Rufous-naped Lark *Mirafra africana* (1R & 2R) and Spike-heeled Lark *Chersomanes albofasciata* 1S-3S. Dots indicate identity to the 1E sequence.

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	1	2	3	4	5]					
[12345678901234567890123456789012345678901234567890]									
1E	ACCC	TCAG	CTACT	TCTAG	GNAACA	ACTANTC	CACANAT	CTCAAG	CAACCA	[50]
2E	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	[50]
3E	N		N		N		N		N	[50]
4E			N		N		N		N	[50]
5E			N		N		N		N	[50]
6E			N		N		N		N	[50]
1W	N		N		T		N		N	[50]
2W			N		T		N		N	[50]
3W			N		T		N		N	[50]
4W			N		T		N		N	[50]
5W			N		T		N		N	[50]
6W			N		T		N		N	[50]
1R	T		GT		C		T		G	[50]
2R	T		GT		C		T		G	[50]
1S	T		T		A		C		CT	[50]
2S	T		T		A		C		CT	[50]
3S	T		T		A		C		CT	[50]
1E	CTGAG	TATTAG	CCTGAG	CCGGACT	TGAAAT	TAAAC	ACTCGCC	ATTCTCC		[100]
2E										[100]
3E										[100]
4E										[100]
5E										[100]
6E										[100]
1W										[100]
2W										[100]
3W										[100]
4W										[100]
5W										[100]
6W										[100]
1R	T		A		TACG		G		C	[100]
2R	T		A		TACG		G		C	[100]
1S			A		TACT		T		C	[100]
2S			A		TACT		T		C	[100]
3S			A		TACT		T		C	[100]
1E	CCCTG	ATCTCAA	AATCTC	ATCAT	CCCCGG	GCCATT	GGAAG	CCGCC	ACTAAG	[150]
2E										[150]
3E										[150]
4E										[150]
5E										[150]
6E										[150]
1W										[150]

2W [150]
 3W [150]
 4W [150]
 5W [150]
 6W [150]
 1R ...A.....C..C.....G.C....A....C..A [150]
 2R ...A.....C..C.....G.C....A....C..A [150]
 1S .A..A....C....C..C..C....A..T..C.....C..A [150]
 2S .A..A....C....C..C..C....A..T..C.....C..A [150]
 3S .A..A....C....C..C..C....A..T..C.....C..A [150]

1E TACTTCCTCACACAAGCCACTGCCTCAGCCCTGCTGCTATTTCGCCGGCAC [200]
 2E [200]
 3E [200]
 4EA..... [200]
 5E [200]
 6E [200]
 1W [200]
 2W [200]
 3W [200]
 4W [200]
 5W [200]
 6W [200]
 1RT..A.....AG.....C.....T..A..G.....A.T.T [200]
 2RA.....AG.....C.....T..A..G.....A.T.T [200]
 1ST..A.....G..AG.C.....CT.A..C.....A..T [200]
 2ST..A.....G..AG.C.....CT.A..C.....A..T [200]
 3ST..A.....G..AG.C.....CT.A..C.....A..T [200]

1E AACCAATGCATGAAGCACAGGACAATGAGACATCACCCAAATAACTCACC [250]
 2E [250]
 3E [250]
 4E [250]
 5E [250]
 6E [250]
 1W [250]
 2W [250]
 3W [250]
 4W [250]
 5W [250]
 6W [250]
 1R G.....C...CAT.....C..... [250]
 2R G.....C...CAT.....C..... [250]
 1SC.....GCA.....G..G.....GGT...T. [250]
 2SC.....CA.....G..G..G.....GGT...T. [250]
 3SC.....CA.....G..G..G.....GGT...T. [250]

1E CAACATCCTGCCTCATCCTCACCTTCGCCCTCGCAATAAAACTTGGCCTA [300]
 2E [300]
 3E [300]
 4E [300]
 5E [300]
 6E [300]
 1W [300]
 2W [300]
 3W [300]
 4W [300]
 5W [300]
 6W [300]
 1RC..A.....A..T.A..T.CT.....A..A... [300]

2R C . . A A . . . T . A . . T . CT A . . A . . [300]
 1S T T . . T . CA T A [300]
 2S T T . CA T A [300]
 3S T T . CA T A [300]

1E GCTCCCTTCCACTTCTGATTCCCCGAAGTCCTCCAAGGATCCACACTTAC [350]
 2E [350]
 3E [350]
 4E [350]
 5E [350]
 6E [350]
 1W [350]
 2W [350]
 3W [350]
 4W [350]
 5W [350]
 6W [350]
 1R . TC . A T C . CT . A . . [350]
 2R . TC . A T C . CT . A . . [350]
 1S . TC . A A T . T AC C . . [350]
 2S . TC . A A T . T AC C . . [350]
 3S . TC . A A T . T AC C . . [350]

1E CACCGGCCTATTACTATCCACGATCATAAACTCCCACCAATAGCACTCC [400]
 2E [400]
 3E [400]
 4E [400]
 5E [400]
 6E [400]
 1W [400]
 2W [400]
 3W [400]
 4W [400]
 5W [400]
 6W [400]
 1R T . T C AGC . . G . G C A . [400]
 2R T . T C AGC . . G . G C G . [400]
 1S T GC . C A . T T C . A . [400]
 2S T GC . C T T C . A . [400]
 3S T GC . C T T C . A . [400]

1E TCTTTATAGTATCCCACTCATTAAACCCAACAGTGCTAACCGGCATAGCT [450]
 2E [450]
 3E [450]
 4E [450]
 5E [450]
 6E [450]
 1W [450]
 2W [450]
 3W [450]
 4W [450]
 5W [450]
 6W [450]
 1R . A . AC . . ACC A . . C A A C [450]
 2R . A . AC . . ACC A . . C A A C [450]
 1S C . G A . . C . G A AT C [450]
 2S C . G A . . C . G AT AT C [450]
 3S C . G A . . C . G . T AT AT C [450]

1E ATCCTCTCCACAGCCCTAGGCGGCTGAATAGGGCTAAATCAAACGCAAAT [500]
 2E [500]
 3E [500]
 4E [500]
 5E [500]
 6E [500]
 1W [500]
 2W [500]
 3W [500]
 4W [500]
 5WA..... [500]
 6W [500]
 1R ...A.A..T.....T....A..T....G..A..G..C....A..... [500]
 2R ...A.A..T.....T....A..T....G..A..G..C....A..... [500]
 1ST...G..A.T....G.....A....C....A..... [500]
 2ST...G..A.T....G.....A....C....A..... [500]
 3ST...G..A.T....G.....A....C....A..... [500]

1E CCGAAAAATTCTCGCCTTCTCCTCAATCTCCACCTAGGCTGAATAACCA [550]
 2E [550]
 3E [550]
 4E [550]
 5E [550]
 6E [550]
 1W [550]
 2W [550]
 3W [550]
 4W [550]
 5W [550]
 6W [550]
 1RC.....T..T.....T.....G..TG [550]
 2RC.....T..T.....T.....G..TG [550]
 1SC.....C.....T.....G... [550]
 2SC.....C.....T..T.....G... [550]
 3SC.....C.....T..T.....G... [550]

1E TCATCATTGCCTACAGCCCCAAACTCGCCCTAATAAACTTCTACCTTTAT [600]
 2E [600]
 3E [600]
 4E [600]
 5E [600]
 6E [600]
 1W [600]
 2W [600]
 3W [600]
 4W [600]
 5W [600]
 6W [600]
 1R C...TC.C.T.....A....C.....G..C [600]
 2R C...TC.C.T.....A....C.....G..C [600]
 1S ...T..CC.....T.....C.....A..C [600]
 2S ...T..CC.....T.....C.....A..C [600]
 3S ...T..CC.....T.....C.....A..C [600]

1E GCCTTAATAACTACAGCCGTGTTCCCTCACAATAAAATCAATCGACGCCCC [650]
 2E [650]
 3E [650]
 4E [650]
 5E [650]
 6E [650]

1W [650]
 2W [650]
 3W [650]
 4W [650]
 5W [650]
 6W [650]
 1R T.TC.....CG.....C.....C.....C.A..A..A. [650]
 2R T.TC.....CG.....C.....C.....C.A..A..A. [650]
 1S ...C.....T...T..T....G..C.....C.....T..GA..TT. [650]
 2S ...C.....T...T..T....G..C.....C.....T..GA..TT. [650]
 3S ...C.....T...T..T....G..C.....C.....T..GA..TT. [650]

1E CAATCTATCAACCCTAATAACCACATGAGCAAAGCCCCGCACTAAACG [700]
 2E [700]
 3E [700]
 4E [700]
 5E [700]
 6E [700]
 1W [700]
 2WR.. [700]
 3W [700]
 4W [700]
 5W [700]
 6W [700]
 1R A..A.....T....GT..C..... [700]
 2R A..A.....T....GT..C..... [700]
 1S A..AT...C..A.....A...A...A.....G.. [700]
 2S A..AT...C..A.....A...A...A..... [700]
 3S A..AT...C..A.....A...A...A..... [700]

1E CAATACTCATGCTTACGCTACTTTCCCTCGCTGGTCTCCCTCCACTCACA [750]
 2E [750]
 3E [750]
 4E [750]
 5E [750]
 6E [750]
 1W [750]
 2W ...W..W..K..W.R.....S..... [750]
 3W [750]
 4W [750]
 5W [750]
 6W [750]
 1R .C.....T..A..A..C..G..C.....A..C.....A..GT..A... [750]
 2R .C.....T..A..A..C..G..C.....A..C.....A..GT..A... [750]
 1SA..C..A.....C..A.....A..C.....A..C..A... [750]
 2SA..C..A.....C..A.....A..C.....A..C..A... [750]
 3SA..C..A.....C..A.....A..C.....A..C..A... [750]

1E GGTTTCCTGCCCAAATGACTCATCATCCAAGAACTAACCAAACAAGACTT [800]
 2E [800]
 3E [800]
 4E [800]
 5E [800]
 6E [800]
 1W [800]
 2WW.....M...MM..... [800]
 3W [800]
 4W [800]
 5W [800]
 6W [800]

1R ..C.....TGT.....A. [800]
 2R ..C.....TGT.....A. [800]
 1S ..C.....G...A. [800]
 2S ..C.....G...A. [800]
 3S ..C.....G...A. [800]

1E AACTCCACAGCAATAATCATCTCCCTCCTCCTCCTCAGTTTATTYT [850]
 2E [850]
 3E [850]
 4E [850]
 5E [850]
 6E [850]
 1WN..... [850]
 2WM.....C. [850]
 3WN..... [850]
 4WN..... [850]
 5WN..... [850]
 6WN..... [850]
 1R G..G...GTG...G.G...C...A....T.....A.AC..G.AC. [850]
 2R G..G...GTG...G.G...C...A....T.....A.AC..G.AC. [850]
 1S ...A...T...C.G...A.....T..T..AG.AC...C. [850]
 2S ...A...T...C.G.A...A.....T..T..AG.GC...C. [850]
 3S ...A...T...C.G.A...A.....T..T..AG.GC...C. [850]

1E TCTACCTCCGCCTCGCCTACTGCGCAACAATCACACTGCCCCCTCACACC [900]
 2E [900]
 3E [900]
 4E [900]
 5E [900]
 6E [900]
 1WN.. [900]
 2W [900]
 3WN.. [900]
 4WN.. [900]
 5WN.. [900]
 6WN.. [900]
 1RT..T..A..T.....C..... [900]
 2RT..T..A..T.....C..... [900]
 1SA.....A.....A.....A..... [900]
 2SA.....A.....A.....A..... [900]
 3SA.....A.....A.....A..... [900]

1E ACAAAACCACATGAAGCAGTGACACACCCNCAAACCANNNNNNNNNNNNNN [950]
 2EN.....GTCCNCCCCTCAAT [950]
 3EN.....NNNNNNNNNNNNNN [950]
 4EN.....GTCCNCCCCTCAAT [950]
 5EN.....GTCCNCCCCTCAAT [950]
 6EN.....GTCCNCCCCTCAAT [950]
 1W N.....N.....GTCCNCCCCTCAAT [950]
 2WA.....GTCCACCCCTCAAT [950]
 3W N.....N.....GTCCNCCCCTCAAT [950]
 4W N.....N.....GTCCNCCCCTCAAT [950]
 5W N.....N.....GTCCNCCCCTCAAT [950]
 6W N.....N.....GTCCNCCCCTCAAT [950]
 1RT..A..A.....AA.....ATTCCTCCCCAGT [950]
 2RT..A..A.....AA.....ATTCCTCCCCAGT [950]
 1SA..A....T...GT..GT.CACCCAATCTTCAAT [950]
 2SA..A..G..T...GT..GT.CACCCAATCTTCAAT [950]
 3SA..A..G..T...GT..GT.CACCCAATCTTCAAT [950]

1E	NNNNNNNNNNNNNNNNNNNNNN	[972]
2E	CGCCATCCTGACAGTCCTATCC	[972]
3E	NNNNNNNNNNNNNNNNNNNNNN	[972]
4E	CGCCATCCTGACAGTCCTATCC	[972]
5E	CGCCATCCTGACAGTCCTATCC	[972]
6E	CGCCATCCTGACAGTCCTATCC	[972]
1W	CGCCATCCTGACAGTCCTATCC	[972]
2W	CGCCATCCTGACAGTCCTATCC	[972]
3W	CGCCATCCTGACAGTCCTATCC	[972]
4W	CGCCATCCTGACAGTCCTATCC	[972]
5W	CGCCATCCTGACAGTCCTATCC	[972]
6W	CGCCATCCTGACAGTCCTATCC	[972]
1R	AGCCATCCTGGCCGTCCTATCC	[972]
2R	AGCCATCCTGGCCGTCCTATCC	[972]
1S	TGCCATCCTGACCGTCCTATCC	[972]
2S	TGCCATCCTGACCGTCCTATCC	[972]
3S	TGCCATCCTGACCGTCCTATCC	[972]

SCL - Habitat Study (Data sheet 2 & 3)

Site Nr.

Date

2	Species	GH	Substrate	Biotic features (%)				
				Grass	Forbs	Bare ground	Stone	Fixed rock
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
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45								
46								
47								
48								
49								
50								

Legend: Micro-habitat features

Grass height (mm)

Substrate

1	2	3	4	5
0-50	>50-150	>150-250	>250-500	>500
Loam	Sand	Pebble	Rock	Clay