

UNITED KINGDOM ACID WATERS MONITORING NETWORK

INVERTEBRATE SURVEY

SECOND YEAR: 1989

Summary of species identification and abundance

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## UKAWMN Invertebrate survey, 1989.

Table 1. List of sites in monitoring network and dates sampled during year 2: 1989.

No.	Type	Site name	Grid reference	Date sampled
1	lake	Loch Coire nan Arr	NG 808422	08.05.89
2	stream	Alt Coire nan Con	NM 793688	07.05.89
3	stream	Alt a Mharcaidh	NH 881045	09.05.89
4	lake	Loch Chon	NN 421051	06.05.89
5	lake	Loch Tinker	NN 445068	06.05.89
6	lake	Lochnagar	NO 252859	10.05.89
7	lake	Round Loch of Glenhead	NX 450804	15.04.89
8	lake	Loch Grannoch	NX 542700	15.04.89
9	stream	Dargall Lane	NX 453787	15.04.89
9.5	stream	Green Burn	NX 481789	15.04.89
10	lake	Scoat Tarn	NY 159104	17.04.89
11	lake	Burnmoor Tarn	NY 184044	16.04.89
12	stream	River Etherow	SK 116997	18.04.89
13	stream	Ashdown Sands	TQ 456294	02.05.89
14	stream	Narrator Brook	SX 580688	10.04.89
15	stream	Beagh's Burn	D 173297	14.04.89
16	stream	Bencrom River	J 305248	13.04.89
16b	lake	*Blue Lough	J 327253	13.04.89
16c	stream	*Coney Glen	H 641884	13.04.89
17	lake	Llyn Lagi	SH 649483	12.04.89
18	lake	Llyn Cwm Mynach	SH 678238	11.04.89
19	stream	Afon Hafren	SN 844876	11.04.89
20	stream	Llyn Brianne C16	SN 771556	11.04.89

\*Sites added since first survey in 1988.

Table 2. List of species recorded in 1988 and 1989 and code numbers. Code numbers from: Maitland, P.S. 1977. A Coded Checklist of Animals Occurring in Fresh Water in the British Isles. NERC: Institute of Terrestrial Ecology

Code	Species	Years recorded	
<b>MOLLUSCA</b>			
13 07 01 07	<u>Lymnaea peregra</u> (Muller)	88	89
13 10 02 01	<u>Ancylus fluviatilis</u> Muller	88	
<b>BIVALVA</b>			
14 03 02 00	<u>Pisidium</u> sp.	88	89
<b>OLIGOCHAETA</b>			
16 00 00 00	OLIGOCHAETA	88	89
<b>HIRUDINEA</b>			
17 02 03 01	<u>Glossiphonia heteroclita</u> (L.)	88	
17 02 03 02	<u>Glossiphonia complanata</u> (L.)		89
17 02 05 01	<u>Helobdella stagnalis</u> (L.)	88	89
17 03 01 01	<u>Haemopsis sanguisuga</u> (L.)	88	
17 04 01 02	<u>Erpobdella octoculata</u> (L.)	88	89
17 04 02 01	<u>Dinea lineata</u> (Muller)	88	
<b>MALACOSTRACA</b>			
28 07 03 03	<u>Gammarus lacustris</u> Sars	88	
28 07 05 01	<u>Niphargus aquilex</u> Schiodte	88	89
<b>EPHEMEROPTERA</b>			
30 01 01 02	<u>Siphonurus lacustris</u> Eaton	88	89
30 01 02 01	<u>Ameletus inopinatus</u> Eaton	88	89
30 02 01 00	<u>Baetis</u> sp.	88	89
30 02 02 01	<u>Centroptilum luteolum</u> (Muller)		89
30 02 02 02	<u>Centroptilum pennulatum</u> Eaton		89
30 03 01 00	<u>Rhithrogena</u> sp.	88	
30 03 01 01	<u>Rhithrogena semicolorata</u> (Curtis)		89
30 03 04 01	<u>Ecdyonurus venosus</u> (Fabricius)	88	
30 03 04 02	<u>Ecdyonurus torrentis</u> Kimmins		89
30 04 01 01	<u>Leptophlebia marginata</u> (L.)	88	89
30 04 01 02	<u>Leptophlebia vespertina</u> (L.)	88	89
30 04 02 03	<u>Paraleptophlebia tumida</u> Bengtsson	88	

Table 2. Continued.

UKAWMN Invertebrate survey, 1989.

Code	Species	Years recorded	
PLECOPTERA			
31 01 03 02	<i>Brachyptera risi</i> (Morton)	88	89
31 02 01 01	<i>Protonemura praecox</i> (Morton)	88	89
31 02 01 03	<i>Protonemura meyeri</i> (Pictet)	88	89
31 02 02 02	<i>Amphinemura sulcicollis</i> (Stephens)	88	89
31 02 03 01	<i>Nemurella picteti</i> Klapalek	88	89
31 02 04 01	<i>Nemoura cinerea</i> (Retzius)	88	89
31 02 04 02	<i>Nemoura dubitans</i> Morton	88	89
31 02 04 03	<i>Nemoura avicularis</i> Morton	88	89
31 02 04 04	<i>Nemoura cambrica</i> (Stephens)	88	89
31 02 04 05	<i>Nemoura erratica</i> Classen	88	89
31 03 01 02	<i>Leuctra inermis</i> Kempny	88	89
31 03 01 03	<i>Leuctra hippopus</i> (Kempny)	88	89
31 03 01 04	<i>Leuctra nigra</i> (Olivier)	88	89
31 03 01 05	<i>Leuctra fusca</i> (L.)	88	
31 05 02 01	<i>Perlodes microcephala</i> (Pictet)	88	
31 05 03 01	<i>Diura bicaudata</i> (L.)	88	89
31 05 04 01	<i>Isoperla grammatica</i> (Poda)	88	89
31 07 01 01	<i>Siphonoperla torrentium</i> (Pictet)	88	89
31 07 01 02	<i>Chloroperla tripunctata</i> (Scopoli)	88	89
ODONATA			
32 02 01 01	<i>Pyrhosoma nymphula</i> (Sulzer)	88	89
32 02 03 01	<i>Enallagma cyathigerum</i> (Charpentier)	88	89
32 06 01 01	<i>Cordulegaster boltonii</i> (Donovan)	88	
32 07 02 05	<i>Aeshna juncea</i> (L.)	88	
32 07 02 06	<i>Aeshna mixta</i> Latreille		89
32 08 01 01	<i>Cordulia lineana</i> Fraser	88	
HEMIPTERA			
33 11 02 01	<i>Cymatia boursdorffi</i> (Sahlberg)	88	89
33 11 04 01	<i>Callicorixa praeusta</i> (Fieber)	88	89
33 11 04 02	<i>Callicorixa wollastoni</i> (Douglas & Scott)	88	89
33 11 06 02	<i>Hesperocorixa sahlbergi</i> (Fieber)		89
33 11 06 03	<i>Hesperocorixa castanea</i> (Thomson)		89
33 11 07 02	<i>Arctocorixa germari</i> (Fieber)	88	89
33 11 08 03	<i>Sigara distincta</i> (Fieber)	88	
33 11 08 07	<i>Sigara scotti</i> (Fieber)	88	89
33 11 08 09	<i>Sigara nigrolineata</i> (Fieber)		89
33 11 08 11	<i>Sigara limitata</i> (Fieber)		89
COLEOPTERA			
35 03 06 06	<i>Coelambus novemlineatus</i> (Stephens)		89
35 03 07 02	<i>Potamonectes assimilis</i> (Paykull)	88	

Table 2. Continued.

UKAWMN Invertebrate survey, 1989.

Code	Species	Years recorded	
35 03 07 03	<u>Potamonectes depressus elegans</u> (Panzer)	88	89
35 03 07 05	<u>Potamonectes griseostriatus</u> (Degeer)	88	89
35 03 07 06	<u>Stictotarsus duodecimpustulatus</u> (Fabricius)	88	
35 03 08 01	<u>Oreodytes davisii</u> (Curtis)		89
35 03 08 04	<u>Oreodytes sanmarkii</u> (Sahlberg)	88	89
35 03 09 14	<u>Hydroporus palustris</u> (L.)	88	89
35 03 09 25	<u>Hydroporus pubescens</u> (Gyllenhal)	88	
35 03 11 15	<u>Agabus arcticus</u> (Paykull)	88	89
35 03 11 17	<u>Agabus chalconatus</u> (Panzer)		89
35 03 11 19	<u>Agabus bipustulatus</u> (L.)	88	89
35 03 12 01	<u>Platambus maculatus</u> (L.)	88	89
35 03 15 02	<u>Rhantus exsoletus</u> Forster		89
35 04 02 06	<u>Gyrinus caspius</u> Menetries	88	89
35 04 02 09	<u>Gyrinus aeratus</u> Stephens	88	89
35 05 05 00	<u>Helophorus</u> sp.	88	
35 05 07 02	<u>Paracymus scutellaris</u> (Rosenhauser)		89
35 05 10 01	<u>Anacaena globulus</u> (Paykull)	88	
35 05 11 01	<u>Laccobius minutus</u> (L.)	88	
35 05 13 00	<u>Enochrus</u> sp.	88	
35 11 01 01	<u>Elmis aenea</u> (Muller)	88	89
35 11 03 01	<u>Limnius volckmari</u> (Panzer)	88	89
35 11 06 00	<u>Qulimnius</u> sp.		89
35 11 06 03	<u>Qulimnius tuberculatus</u> (Muller)	88	89
35 14 00 00	CURCULIONIDAE	88	
<b>MEGALOPTERA</b>			
36 01 01 01	<u>Sialis lutaria</u> (L.)	88	89
36 01 01 02	<u>Sialis fuliginosa</u> Pictet		89
<b>TRICHOPTERA</b>			
38 01 01 01	<u>Rhyacophila dorsalis</u> (Curtis)	88	89
38 01 01 02	<u>Rhyacophila septentrionis</u> McLachlan		89
38 01 02 01	<u>Glossosoma conformis</u> Neboiss	88	89
38 01 03 00	<u>Agapetus</u> sp.		89
38 02 01 01	<u>Philopotamus montanus</u> (Donovan)	88	89
38 02 02 00	<u>Wormaldia</u> sp.		89
38 03 02 01	<u>Electrocnemis conspersa</u> (Curtis)	88	89
38 03 02 02	<u>Electrocnemis geniculata</u> McLachlan	88	89
38 03 03 01	<u>Polycentropus flavomaculatus</u> (Pictet)	88	89
38 03 03 02	<u>Polycentropus irroratus</u> (Curtis)	88	
38 03 03 03	<u>Polycentropus kingi</u> McLachlan	88	
38 03 04 01	<u>Holocentropus dubius</u> (Rambur)	88	
38 03 04 02	<u>Holocentropus picicornis</u> (Stephens)	88	
38 03 05 01	<u>Cyrnus trimaculatus</u> (Curtis)	88	
38 03 05 03	<u>Cyrnus flavidus</u> McLachlan	88	89
38 04 02 01	<u>Tinodes waeneri</u> (L.)	88	89

Table 2. Continued.

UKAWMN Invertebrate survey, 1989.

Code	Species	Years recorded	
38 04 03 01	<u>Lype phaeopa</u> (Stephens)		89
38 04 03 02	<u>Lype reducta</u> (Hagen)		89
38 04 04 01	<u>Metalype fragilis</u> (Pictet)	88	89
38 05 01 09	<u>Hydropsyche siltalai</u> Dohler	88	89
38 07 02 01	<u>Phryganea grandis</u> (L.)	88	
38 07 02 03	<u>Agrypnia varia</u> (Fabricius)	88	89
38 07 02 04	<u>Agrypnia obsoleta</u> McLachlan		89
38 08 00 00	LIMNEPHILIDAE undetermined	88	89
38 08 03 01	<u>Drusus annulatus</u> Stephens	88	89
38 08 04 01	<u>Ecclisopteryx guttulata</u> (Pictet)		89
38 08 05 00	<u>Limnephilus</u> sp.		89
38 08 05 01	<u>Limnephilus rhombicus</u> (L.)	88	89
38 08 05 03	<u>Limnephilus subcentralis</u> (Brauer)		89
38 08 05 04	<u>Limnephilus borealis</u> (Zetterstedt)		89
38 08 05 05	<u>Limnephilus marmoratus</u> Curtis	88	89
38 08 05 10	<u>Limnephilus lanatus</u> Curtis	88	89
38 08 05 20	<u>Limnephilus centralis</u> Curtis	88	
38 08 05 23	<u>Limnephilus vittatus</u> (Fabricius)	88	89
38 08 09 01	<u>Anabolia nervosa</u> Curtis	88	89
38 08 11 01	<u>Potamophylax latipennis</u> (Curtis)		89
38 08 11 02	<u>Potamophylax cingulatus</u> (Stephens)		89
38 08 11 03	<u>Potamophylax rotundipennis</u> (Brauer)	88	89
38 08 12 01	<u>Halesus radiatus</u> (Curtis)		89
38 08 12 02	<u>Halesus digitatus</u> (Schrank)	88	89
38 08 13 01	<u>Melanophylax mucoreus</u> (Hagen)	88	
38 08 15 00	<u>Stenophylax</u> sp.	88	89
38 08 15 04	<u>Micropterna sequax</u> (McLachlan)	88	
38 08 16 01	<u>Mesophylax impunctatus</u> McLachlan		89
38 08 19 01	<u>Chaetopteryx villosa</u> (Fabricius)	88	89
38 12 01 06	<u>Athripsodes aterrimus</u> (Stephens)		89
38 15 01 01	<u>Sericostoma personatum</u> (Spence)	88	89
	DIPTERA		
40 00 00 00	CHIRONOMIDAE	88	89
40 01 00 00	TIPULIDAE		89
40 01 17 00	<u>Tipula</u> sp.	88	
40 01 35 00	<u>Dicranota</u> sp.	88	89
40 01 43 00	<u>Limnophila</u> sp.	88	
40 04 01 05	<u>Dixa puberula</u> Loew	88	
40 05 00 00	CHAOBORIDAE		89
40 08 00 00	CERATOPOGONIDAE	88	89
40 15 01 00	<u>Prosimulium</u> sp.	88	89
40 15 05 00	<u>Simulium</u> sp.	88	89
40 17 00 00	EMPIDIDAE		89
40 17 03 00	<u>Chelifera</u> sp.	88	

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Table 3. Abundance of species in stream sites. Abundance category 1 = scores of 1-9; 2 = 10-99; 3 = >100. See Table 1 for site names; see Table 2 for species names.

Species code	Site number											
	2	3	9	9.5	12	13	14	15	16	16c	19	20
16 00 00 00	1	2	1	1	2	1	1		2		1	1
28 07 05 01			-			2			-			-
30 01 02 01			-		1	-			-			-
30 02 01 00	1	3	-			-	2		-			-
30 03 01 01	2	2	-			-			-			-
30 03 04 02	1		-			-			-			-
30 04 01 02			-			-	1		-			-
31 01 03 02	1	3	-	3	1	-	2	1	-	2	2	-
31 02 01 01	1		1		2	-	1		1			-
31 02 01 03	2	2	2	1	2	-	2	2	-		2	-
31 02 02 02	2	2	2	3	2	-	1		2	1	3	1
31 02 03 01			-		1	-			-			-
31 02 04 01			-	1	1	-			1			-
31 02 04 04			1		2	3			-	1		2
31 02 04 05			-			-		1	-			-
31 03 01 02	1	3	1	3	3	-	3	1	2	1	3	-
31 03 01 03			-	1		-	1	1	-		2	1
31 03 01 04			-			3	1	1	-			-
31 05 03 01		1	-			-			-		1	-
31 05 04 01	2	3	1	1		-	2		-	1		1
37 07 01 01		1	1	2	1	-	2	2	1	3	2	1
31 07 01 02	2	2	-			-			-			-
35 03 08 01			-			-			-	1		-
35 03 08 04			-	1		-			-			-
35 11 01 01			-			-	1		-	1		-
35 11 03 01	2		-			-			1			-
36 01 01 01			-			1			-			-
38 01 01 01	1	2	-	1		-	1	1	-		2	-
38 01 01 02		1	-			-			-			-
38 01 02 01		1	-			-			-			-
38 02 01 01		1	-			-	2		-			-
38 02 02 00			-			-	1		-			-
38 03 02 01			1	1		-		1	-			1
38 03 02 02	1	1	1			2	1	1	-		1	-

Table 3. Continued.

UKAWNE Invertebrate survey, 1989.

Species code	Site number											
	2	3	9	9.5	12	13	14	15	16	16c	19	20
38 03 03 01	1		-	1		-			-			-
38 04 04 01			-			-	1		-			-
38 05 01 09			-			-	2		-			-
38 08 00 00			-			-	1		-			-
38 08 03 01	1		-		1	-			-		1	-
38 08 04 01			-			-			-		1	-
38 08 11 01	1	1	-			-			-			-
38 08 11 02			-		1	-	1		-			-
38 08 11 03			-	1		1			-			-
38 08 12 02			-			-	1		-			-
40 00 00 00	1	3	2	3	3	2	2	1	2	1	2	-
40 01 00 00		1	-			-			-			-
40 01 35 00	1	2	1	1	1	1	2		1		1	1
40 08 00 00			-			1			-			-
40 15 01 00		3	-			-			-			1
40 15 05 00	1	3	1			3	2	1	2	2	2	3
40 17 00 00		1	-	1		-		1	-			-



Table 4. Species abundances in lake sites. Abundance category 1 = scores of 1-9; 2 = 10-99; 3 = >100. See Table 1 for site names; see Table 2 for species names.

## Habitat types:

- 1 = substratum of peat, sand, gravel or plant detritus. No macrophytes.
- 2 = substratum of gravel, pebbles, cobbles or boulders. No macrophytes.
- 3 = macrophyte growth over cobbles, pebbles, or boulders.
- 4 = macrophyte growth over peat or silt.
- 5 = macrophyte growth over sand or gravel.
- 6 = vertical or undercut banks, sedge and/or willow roots.

a) Site 1: Loch Coire nan Arr; and Site 2: Loch Chon.

Species code	Site number - Habitat code.										
	1-1	1-2	1-4	1-5	1-6	-	4-2	4-3	4-4	4-5	4-6
13 07 01 07	1	1	1			-					
14 03 02 00				1		-		1			
16 00 00 00	1	1	1	2	1	-	2	1	2	1	2
17 02 05 01					1	-	1				
30 01 01 02	2				2	-					
30 01 02 01			1		1	-					
30 02 02 01						-	1		1		1
30 02 02 02			1		1	-					
30 03 01 01	1					-					
30 04 01 01						-		1	1		1
30 04 01 02		2			2	-	3	3	3	3	3
31 02 03 01						-					1
31 02 04 03						-	1	1	1	1	
31 02 04 04						-	1	1	1		2
31 03 01 04						-		1	1	1	
31 07 01 01						-	1				
32 02 01 01						-		1	1	1	
32 02 03 01						-	1	1	1	1	
33 11 02 01						-					1
33 11 04 01						-	1	1	1	1	

Table 4a: continues -->

Table 4. Continued.

UKAWMN Invertebrate survey, 1989.

a) continued.

Species code	Site number - Habitat code.										
	1-1	1-2	1-4	1-5	1-6	-	4-2	4-3	4-4	4-5	4-6
33 11 06 02						-	1	1	2		2
33 11 06 03						-				1	
33 11 08 09						-	1	1	1	1	
33 11 08 11						-		1			
35 03 06 06						-					1
35 03 07 03						-	1	1	1	2	1
35 03 11 15						-			1		
35 03 15 02						-			1		
35 04 02 09						-			2		
35 11 03 01						-					1
35 11 06 00			1			-			1		1
36 01 01 01						-	1	1	2	1	1
38 03 02 01						-		1	1	1	1
38 03 02 02	1		1			-	1	1	1	1	1
38 03 03 01		1	1			-	1			1	
38 08 05 00						-			1		1
38 08 05 01						-				1	
38 08 05 03						-			1		1
38 08 05 05						-			1		
38 08 09 01						-			1		1
38 08 12 01					1	-			1		1
38 15 01 01						-	1	1			
40 00 00 00	2	2	1	2	2	-	2	2	2	1	2
40 01 00 00					1	-					
40 08 00 00	1					-					1
40 15 01 00						-					1
40 17 00 00	2			2	1	-					

Table 4. Continued.

UKAWMN Invertebrate survey, 1989.

b) Site 5: Loch Tinker; and Site 6: Lochnagar.

Species code	Site number - Habitat code.										
	5-2	5-3	5-4	5-5	5-6	-	6-1	6-2	6-3	6-3	6-6
14 03 02 00	1		1	1		-					
16 00 00 00	1		1		3	-		1			
30 04 01 02	2			1	1	-					
31 02 04 03						-		1	1		
31 02 04 04	1				1	-					
31 02 04 05						-					1
31 03 01 03						-	1	2	2	2	1
31 05 03 01						-		1	1		
31 07 01 01						-			1	1	
35 03 07 03			1			-					
35 03 08 01						-	1			1	
35 04 02 06					1	-					
36 01 01 01						-				1	
36 01 01 02	1					-					
38 03 02 01				1		-				1	
38 07 02 04			1			-					
38 08 00 00						-	1	1	2	2	1
38 08 12 01	1				1	-					
40 00 00 00	2	2	1	1	2	-					
40 01 35 00						-	1	1		1	
40 15 05 00						-		1		1	

Table 4. Continued.

UKAWMN Invertebrate survey, 1989.

c) Site 7: Round Loch of Glenhead; and Site 8: Loch Grannoch.

Species code	Site number - Habitat code.										
	7-1	7-2	7-2	7-5	7-6	-	8-1	8-2	8-2	8-3	8-5
14 03 02 00						-		1		1	1
16 00 00 00	1	1	1	2	1	-	2	3	2	2	2
30 01 01 02						-			1	1	1
30 04 01 02		2	1	1	2	-	2	3	2	3	2
31 02 02 02						-				1	
31 02 04 04					1	-		1	1	1	3
31 03 01 02						-		2	2	1	
33 11 04 02						-	1	1	1	1	1
33 11 07 02						-		1	1	1	1
35 03 07 03		1				-		1		1	1
35 03 07 05	1		1			-	1	1		1	1
35 03 08 04						-		1			
35 03 09 14					1	-					
35 11 06 03						-		3	2	2	1
38 03 02 02						-		1	1	1	
38 03 03 01		1	1			-		1	1	1	
38 07 02 03						-		1		1	
38 08 05 01						-		1		1	
38 08 05 04						-				1	
38 08 05 10						-					1
38 08 09 01						-			1	1	2
38 08 12 01						-					1
38 08 19 01						-		1			1
38 12 01 06				1		-					
38 15 01 01						-		1	1		
40 00 00 00	3	3	3	3	3	-	2	2	2	2	2
40 05 00 00			1			-					
40 15 05 00				1		-					
40 17 00 00	1			1		-		1	1		

Table 4. Continued.

UKAWMN Invertebrate survey, 1989.

d) Site 10: Scoat Tarn; and Site 11: Burnmoor Tarn.

Species code	Site number - Habitat code.										
	10-1	10-2	10-2	10-3	10-6	-	11-1	11-2	11-2	11-3	11-6
14 03 02 00						-	1	1			
16 00 00 00	1	1	1	1		-	1	1	2	1	1
17 02 03 02						-				1	
17 04 01 02						-			1		
30 04 01 02						-		2	1		1
31 07 01 01		1	2			-		2	1	1	1
33 11 04 02				1		-					
33 11 06 03		1				-					
35 03 09 14		1				-					
35 03 11 15					1	-					
35 03 11 19					1	-					
35 03 12 01						-					1
35 05 07 02						-					1
35 11 06 03						-		1		1	1
36 01 01 01			1			-					
38 03 02 01				1		-			1		
38 03 02 02		1	1			-				1	
38 04 02 01						-				1	
38 04 03 01						-		1	1		
38 04 03 02						-		1		1	1
38 08 00 00						-					1
38 15 01 01						-		1	1		
40 00 00 00	3	3	2	3	2	-	1	2	2	2	2
40 17 00 00	1					-			1		

Table 4. Continued.

UKAWMN Invertebrate survey, 1989.

e) Site 16b: Blue Lough.

Species code	Site number - Habitat code.				
	16b-1	16b-2	16b-3	16b-4	16b-6
16 00 00 00	1	2			1
30 04 01 02	1	2	1		1
33 11 07 02		1	1	1	
35 03 07 05		1	1	1	
35 03 11 17					1
38 03 02 01		1			
40 00 00 00	2	2	2	2	1

Table 4. Continued.

UKAWNI Invertebrate survey, 1989.

f) Site 17: Llyn Lagi; and Site 18: Llyn Cwm Mynach.

Species code	Site number - Habitat code.										
	17-2	17-3	17-5	17-5	17-6	-	18-2	18-3	18-3	18-4	18-5
16 00 00 00	2		2	2		-	1				
17 04 01 02		1				-	1	1		1	
30 04 01 01		1				-	1	1	1	1	
30 04 01 02	2	1	2	2	1	-	2	2	2	2	3
31 02 04 01	1	1			1	-					
31 02 04 02						-					1
31 02 04 03		1				-					
31 02 04 04						-	1				1
31 03 01 03	1					-					
31 07 01 01	1	1				-					
32 02 01 01						-	1	1			
32 07 02 06						-					1
33 11 02 01						-		1	1		
33 11 08 07						-			1	1	
35 03 07 03					1	-					
35 11 06 00			1			-					
38 01 03 00				1		-					
38 03 02 02	1		1	1		-		1	1		
38 03 03 01			1			-					
38 03 05 03	1					-					
38 07 02 03						-				1	
38 08 05 23			1	1	1	-					
38 08 09 01						-		1	1		1
38 08 16 01						-		1			
38 15 01 01						-			1		
40 00 00 00	2	2	2	2	1	-	2	1	1	2	
40 17 00 00	1		2	1		-					