

COLEOPTERA RECORDED FROM SITES IN SUTHERLAND (V.C. 108)
AND CAITHNESS (V.C. 109) FROM 28TH JULY TO 9TH AUGUST 1972

by

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The 427 species of Coleoptera listed below were recorded during an entomological survey funded by the Shell Grant and the Nature Conservancy. The survey team was based at Aberdeen University's, Wyllie Fenton Field Station at Bettyhill. Other members of the team, whose Coleoptera records have been included in this report are as follows:-

P.J. Chandler (Diptera)

Dr M.G. Morris (Coleoptera, Curculionoidea & Hemiptera, Heteroptera and Auchenorrhyncha)

E.C. Pelham-Clinton (Lepidoptera)

H.L.G. Stroyan (Homoptera, Aphidae and Auchenorrhyncha)

G.E. Woodroffe (Hemiptera, Heteroptera)

Localities from which Coleoptera were recorded are as follows:-

1. Invernaver National Nature Researve, Sutherland.
 - (a) NC(29)6861, dunes and dried-up stream bed.
 - (b) NC68(69)61, foreshore and Lochan Druim an Duin.
 - (c) NC6960, Loch Chuibhe
 - (d) NC7061, sandy terrace
 - (e) NC6960(61), Druim Chuibhe
 - (f) NC7059, Loch Mer
 - (g) NC7060, Loch Mer and hay barn
2. Bettyhill, Sutherland, (Wyllie Fenton Field Station), NC7062.
3. Farr Bay, Sutherland, NC7162.
4. Strathy Bay, Sutherland, NC8365.
5. Strathy Bog National Nature Reserve, Sutherland, NC8052.
6. Armadale Bay, Sutherland, NC9764.
7. Tongue, Sutherland.
 - (a) Kyle of Tongue, NC5858.
 - (b) Tongue Woods, NC5958.
8. Achnabourin, Strathnaver, Sutherland, NC7058.
9. Allt Beag, Armadale, Sutherland, NC7863, flood refuse.

10. Ben Loyal National Nature Reserve, Sutherland.
 - (a) NC5748 summit
 - (b) NC5847 1100-1500 ft.
 - (c) NC5848 1500-2000 ft. and G.E.W. > 2000 ft.
 - (d) NC5849 1500 ft.
 - (e) NC6148 500-600 ft.
11. Borgie Forest, Sutherland, NC6658
12. Loch Chealamy, Invernaver, Sutherland, NC7250
13. Keiss Links, Sinclair's Bay, Caithness
 - (a) ND(39)3358, dunes
 - (b) ND3458, foreshore
14. Near Reay, Sutherland, NC969649
15. Castletown, Harland, Caithness, ND199673
16. Sackville House, Hastigrow, Caithness, ND256615
17. Skail Burn, Strathnaver, Sutherland, NC7047(48)
18. Loch Borralie, Durness, Sutherland, NC3867
19. Thurso Railway Station, Caithness, ND112679

In addition, on the way to Bettyhill, Messrs. Morris, Welch and Woodroffe, paid a brief visit to The Mound Alderwoods N.N.R. on 27 July 1972. An annotated list of the 58 species of Coleoptera recorded, together with comments on a few of the more interesting species has recently been published (Welch, 1979).

Records for a number of the littoral species collected at Keiss Links on 3 August 1972 have already been published (Welch, 1974), whilst a full list is included in the list of Additional Species in the site report for Site 65, Sinclair's Bay (I.T.E. Project 469, 1979 Vol II, part 2). Records for localities Nos. 1, 3 and 4, listed above, have also been included under "Additional Species" in the reports on Sites 57 (Bettyhill), 58 (Farr Bay) and 59 (Strathy) respectively.

Nomenclature follows Kloet and Hincks (1977). Under each species records are given in chronological order giving the locality number as shown in the above list, followed by the day and month of capture during 1972, number of specimens, habitat, and where records are not mine the initials of the collector are given in brackets.

The species of Coleoptera recorded, quite naturally, reflect the interests of the collectors. The Staphylinidea comprise approximately 60% of the species

recorded, 192 of which are in the family Staphylinidae. Similarly the Curculionoidea amount to 50 species, 24 of which were recorded only by Dr M.G. Morris. Some indication of the paucity of previous Coleoptera records from this part of Scotland can be judged by the fact that approximately 80% of the weevils collected had not previously been recorded from one or other (or both) of the two Vice Counties concerned. Such a statement is only justifiable because of the extensive compilation of weevil records undertaken over many years by Dr Morris. The only other group for which a similar level of knowledge exists is the Water Beetles (Balfour-Browne, 1940-1958). During this survey 41 species of 8 aquatic or partially aquatic families, were recorded. Identity of the two Elmidae was based on larval specimens using Hollad's (1972) key. Both species were previously known from a handful of sites in both Vice Counties. Moore (1957) summarised the distribution of British Carabidae which, although on a county basis for England and Wales, divided Scotland into six regions. His North Highlands (Region V) included mainland Scotland north of a line roughly from Loch Alsh to the Beaully Firth. From this large area of Scotland he recorded only 20% of the species known from Britain up to that date. This survey alone provided records for eight additional species, plus the unidentified Dromius larva since Moore records no species of this genus from the region. Dr M.L. Luff is currently organising a mapping scheme for the Carabidae and his provisional maps (Luff, 1977) for the genus Carabus contain no records for the Vice County of Caithness and only six 10 km squares in Sutherland. Although only two species of Carabus were collected, a total of 44 species of ground beetle was recorded during the two weeks duration of this survey, compared with the 29 species trapped from a limited habitat at 16 North Coast sites over a six week period in June and July 1976 (I.T.E. Project 469). In the early 1960s I carried out a very extensive literature search and examination of museum collections for species of the staphylinid genus Aleochara (Welch, 1965). Of the 27 species, then recognised as British, only two had been collected within these two Vice Counties; A. lanuginosa, a common species in cow dung, from Sutherland, and A. algarum, a species of seaweed and littoral carrion, from Caithness. In addition to A. lanuginosa five other species were recorded in Sutherland during this survey and two of these were taken in Caithness. Of the remainder, from what is known of their distribution and habits, possibly half-a-dozen other species could be expected to occur in this area. When Johnson (1975) added Ptinella cavelli to the British list he gave its most northerly limit at Rothiemurchus Forest, East Inverness, yet it was found to be common at two of the three localities where Fagus logs were examined. Similarly when Tozer (1973) separated species of the Lathridius minutus group the most northerly specimen available to her were from the Central Highlands of Scotland. L. pseudominutus has now been seen to be widely distributed at

sites along this northern coast.

In any entomological survey in Scotland species with a restricted Scottish or northern distribution are often of primary interest to entomologists from the south. Such species are more likely to occur on the higher ground inland than along the coast. The visit to Ben Loyal provided many such examples.

Geodromicus longipes, which Tottenham (1954) regarded as "rare, a mountain species" Ocyusa hibernica and Atheta tibialis which Joy (1932) recorded as "very rare" and "local, in moss on mountains"; Aphodius lapponum, which Britton (1956) describes as "a northern and mountain species, rare except in the Scottish Highlands, in sheep droppings"; Patrobis assimilis, regarded by Lindroth (1974) as "predominantly northern"; Autalia puncticollis is a northern species in dung; Anthophagus alpinus was shown by Claridge and Murphy (1967) to be a northern species extending south as far as Snowdonia; Atheta picipennis which is sometimes locally common in deer dung in the Scottish Highlands; Olophrum fuscum has been shown by Hammond (1971) to be a mainly northern species although it is also known from East Anglia, especially from the fens; and although Joy regarded Othius angustus as "chiefly on mountains", more recent collecting has shown this species to be much more widely distributed. Such misleading statements are only to be expected in a standard work based on data available fifty years ago. It is this lack of more recent definitive published studies which makes the interpretation of such survey data very difficult.

On 7th August a heavy storm resulted in a flash flood in a small burn, the Allt Beag, near Armadale to such an extent that it overflowed its banks and deposited large accumulations of plant debris where it passed under the road. A quantity of this was collected in polythene bags and later extracted on Tullgren funnels upon my return to Monks Wood. Flood refuse is eagerly sought after by Coleopterists since it frequently contains species which are difficult to find elsewhere and, indeed, some species are known only from such collections. In this case over 150 species of Coleoptera were recorded, of which 46 were not recorded elsewhere during this survey. Larvae probably representing three additional species, whose identity cannot presently be determined, were also collected. Some of these specimens may have been carried down from the hills rising to over 500 ft. inland, although it is more probable that most, particularly those species not associated with aquatic or marshy habitats, originated in the flooded pasture close to the site of collection. The most notable species recorded was a single male Thinobius bicolor which Tottenham (1956) records as "very rare, Invernesshire", "found in tufts of grass and under stones and shingle by rivers, possibly

overlooked an account of their small size". Another species of similar habitats, Aloconota currax was represented by a single female. Joy records this species as "local, in shingle on river banks". Other northern species caught include Geodromicus nigrita and Liogluta granigera. Members of the Atheta sub genus Philhygra formed a large component of the Staphylinidae present. A. elongatula and A. malleus were particularly numerous although the latter species is recorded by Joy as "local, England South to Yorks". (a single female was also collected in Sphagnum at 1500 ft. on Ben Loyal). Two males and one female A. hygrobia were collected. Joy recorded it as Hygroecia magniceps as very rare in Scotland and Hertfordshire, and A. obtusangula, of which two males were caught was also regarded as very rare throughout Britain. Apart from Joy's data being out of date there has also been some confusion over the nomenclature of this group of species. A few other species are worthy of comment. The single specimen of Anthobium atrocephalum collected considerably extends the northern known limits of this species, which was based on records from two Moray Firth sites obtained during I.T.E. Project 469 in the summer of 1977. Megarthus denticollis is listed by Tottenham (1956) as occurring in England and Ireland. However, Murray (1853) gives Aberdeenshire as the most northerly of three Scottish localities. A single male was found in the flood refuse and a further three specimens were later sieved from mouldy hay at Farr Bay. Joy records Atheta marina as "England local, under tidal refuse", and this species is generally regarded as occurring under saline conditions. The three specimens obtained here must have originated from an area which, at its nearest point, was at least half a mile from the coast. Aploderus caelatus, a species of dung and vegetable refuse is recorded by Tottenham as "common in the south, rarer in the north". Myllaena kraatzi is one of the rarer members of the genus and it was surprising that Gabrius trossulus should be so common in the absence of any other species of that genus.

At these northern latitudes any woodland outside the Forestry Commission's plantations is somewhat of a rarity and, wherever possible, the opportunity was taken to collect in any such localities. Reference has already been made to Ptinella cavelli under Fagus bark. Other species of Omaliinae from this same habitat regarded as rare, Scottish or northern species by Tottenham are Dropephylla grandiloqua, Phloeostiba lapponica and Acrulia inflata. Another "rare, Scottish Highlands" species collected from Piptoporus betulae was Dropephylla heeri. However, although two species of Eusphalerum were recorded E. lapponicum, which is "restricted to the Highlands of Scotland", was not encountered. Aphodius sordidus, found locally at Invernaver, was regarded by Britton (1956) as "local, rare in Scotland". Oxypoda islandica, a northern species, was only found at Strathy Bay, which Trichocellus cognatus (with

T. placidus), locally common at Achnabourin, is a species with a predominantly northern distribution but, like Olophrum fuscum, is also known from the East Anglian fens. Tipnus unicolor is one of the spider beetles usually found associated with stored food products indoors. Fowler (1890) under the name Niptus crenatus recorded it "In old wood, occasionally found in bird's nests and about houses, Scotland in old houses", as far north as the Dee district. Hinton (1931) quotes Fowler and states that "in the British Museum there are specimens taken in the nest of a house martin", but Joy (1932) records it only from "amongst old wood, local". More unusual is that Woodroffe (1953), did not include this species in his study of the fauna of birds' nests. It was, therefore, somewhat surprising to find this species by far the most abundant in a blackbirds' nest at Bettyhill. The nest was 7 ft. above ground on a densely ivy-covered wall and judging by the presence of a mole flea (Hystrichopsylla talpae) it had been later used by a small mammal. Smaller numbers of T. unicolor were also found in a barn, both in the hay and in House Sparrows' nests in the eaves.

Following the extensive pitfall trap collections made at coastal sites in Scotland as part of I.T.E. Project 469, some comparisons can be made with this survey based on hand collecting. Although the Carabidae are usually well represented in pitfall trap material Clivina fossor was not trapped at any of the 58 coastal sites and only a single specimen was found at Invernaver. Harpalus latus and Dyschirius globosus were not trapped at any North Coast site although the former was found at Tongue and both species were fairly common in flood refuse at Armadale and both have been recorded from Shetland (M.E. Bacchus pers. comm.). In 1976 and 1977 Bradycellus harpalinus was not trapped north of the Moray Firth. However, a single male was found inland near Castle-town, Caithness. It is interesting that Falagria thoracica only occurred in pitfall trap samples from Bettyhill and Sandwood, and during this survey was only found in two areas close to the former trapping site, thus emphasising what may be a very localised distribution in northern Scotland.

Mention has been made above of the more obviously outstanding records and for those groups in which I have a more personal interest of for which data is readily available. Doubtless research into some of the other families would provide many more notable records, but for such an under-recorded part of Scotland even confirmation of the presence of common, widely distributed species is of value.

All records of Carabidae will be notified to Dr M.L. Luff (Department of Agricultural Biology, University of Newcastle-upon-Tyne) to be amalgamated into his mapping scheme; records of Staphylinidae will be sent to P.M. Hammond

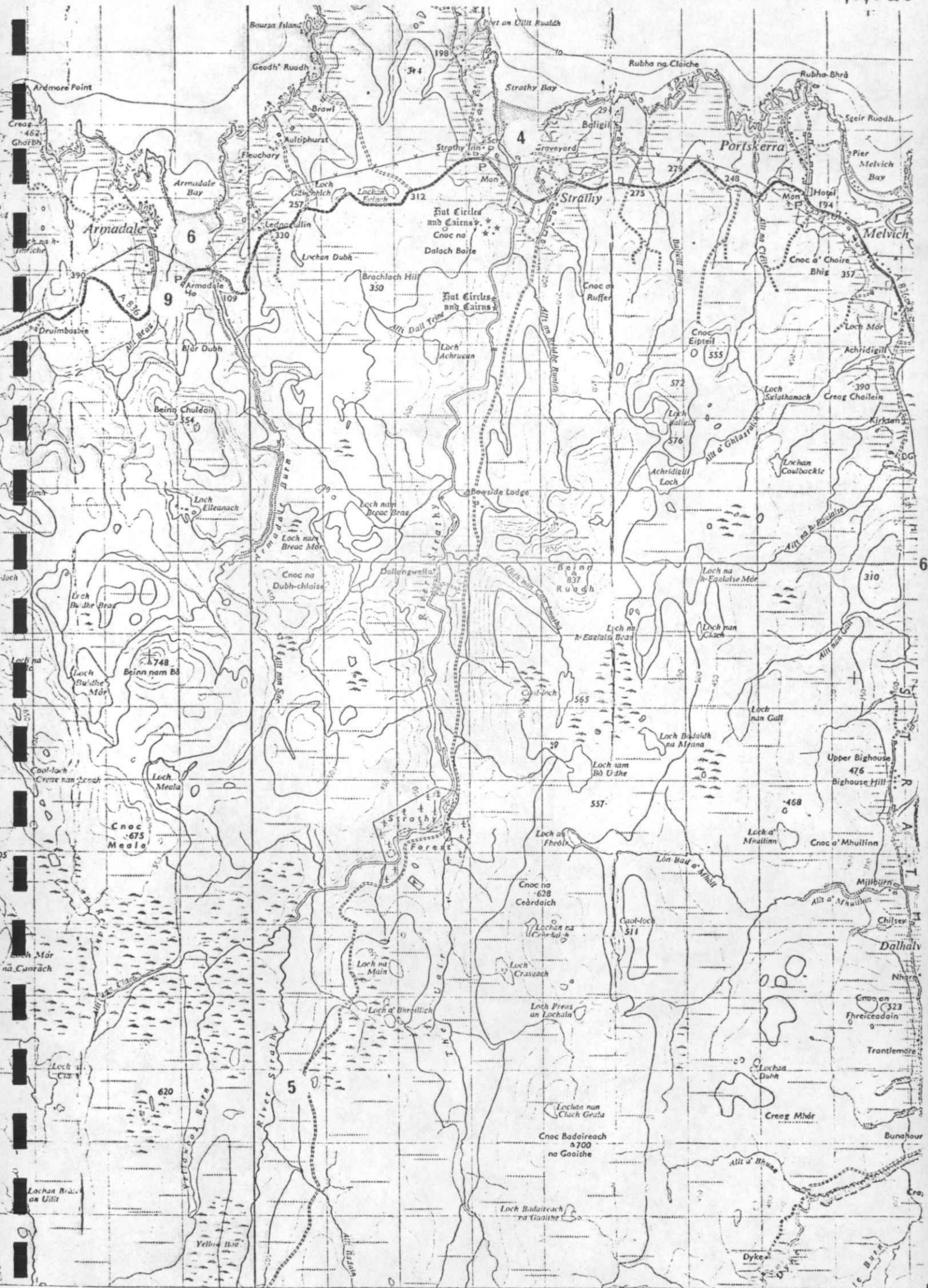
(Natural History Museum, South Kensington); and records of Curculionoidea to Dr. M.G. Morris (I.T.E., Furzebrook).

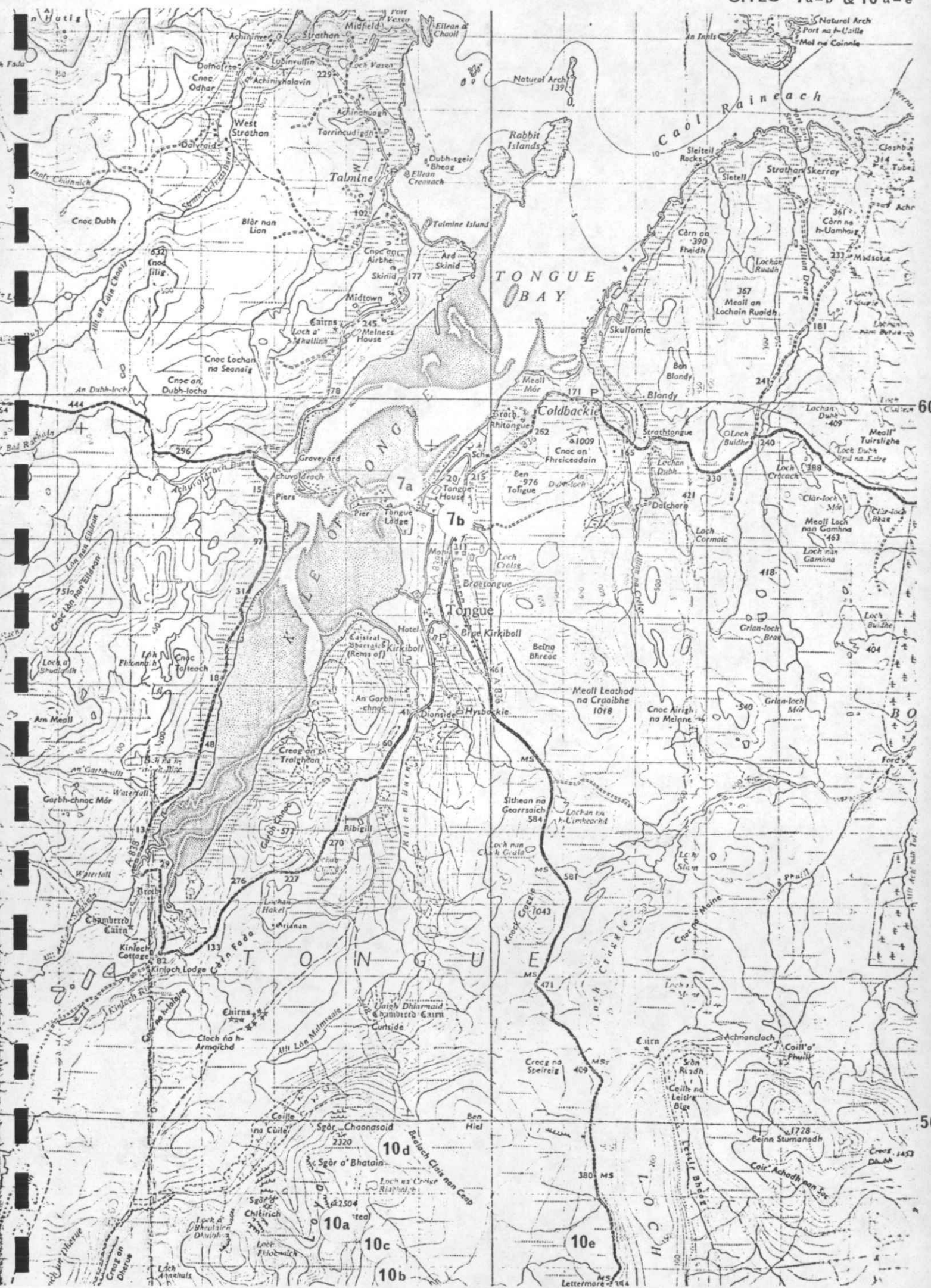
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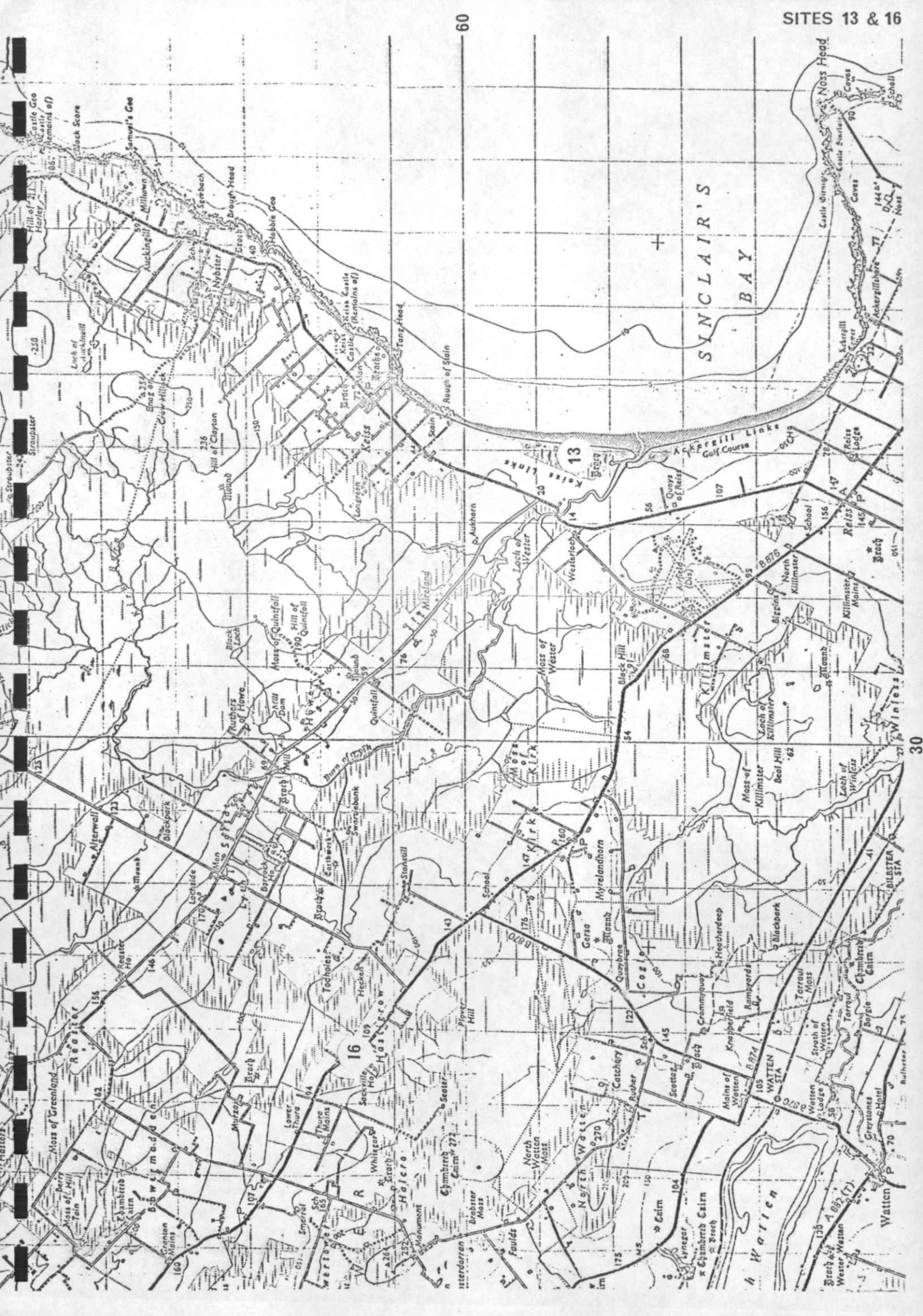
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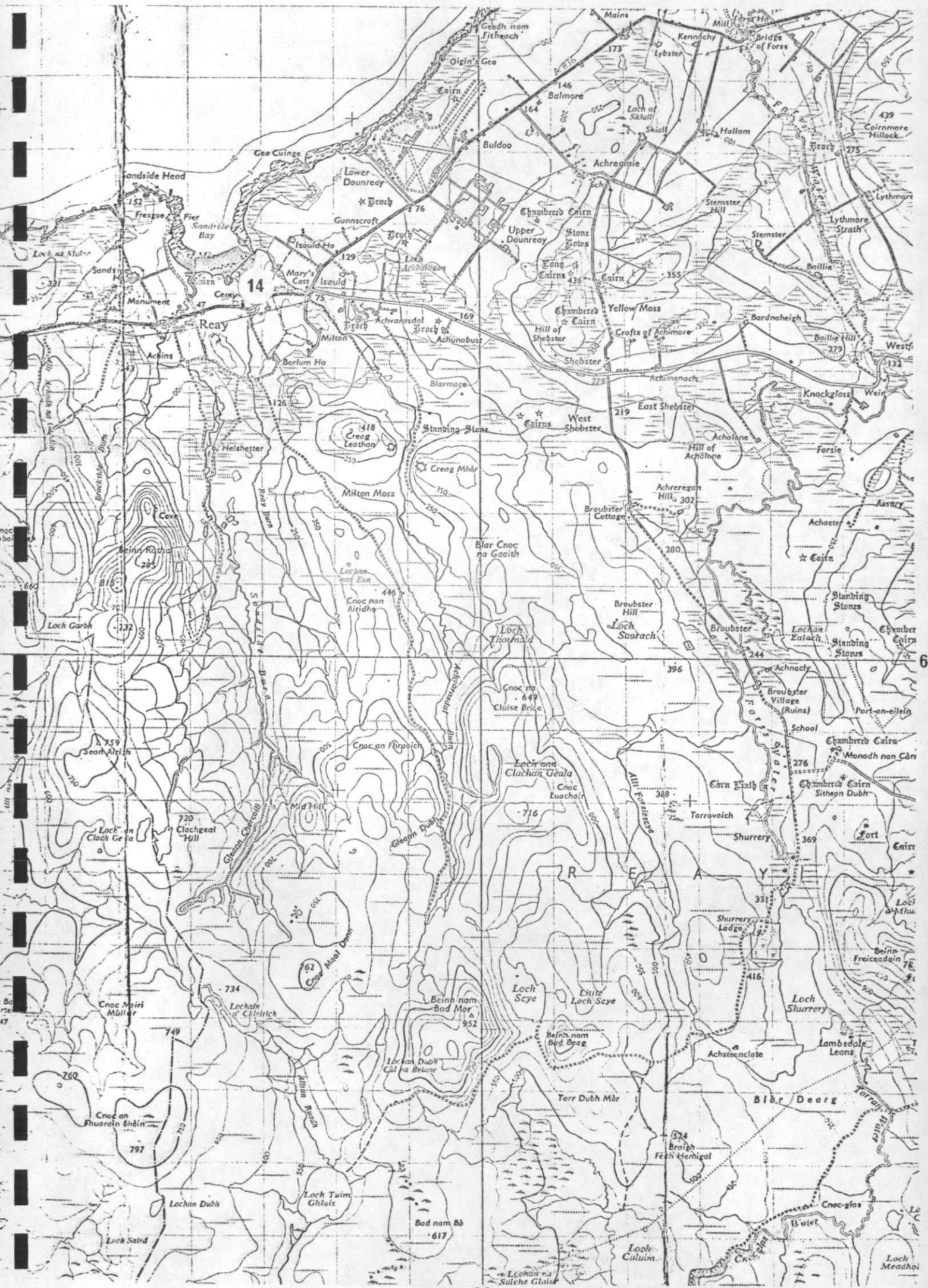


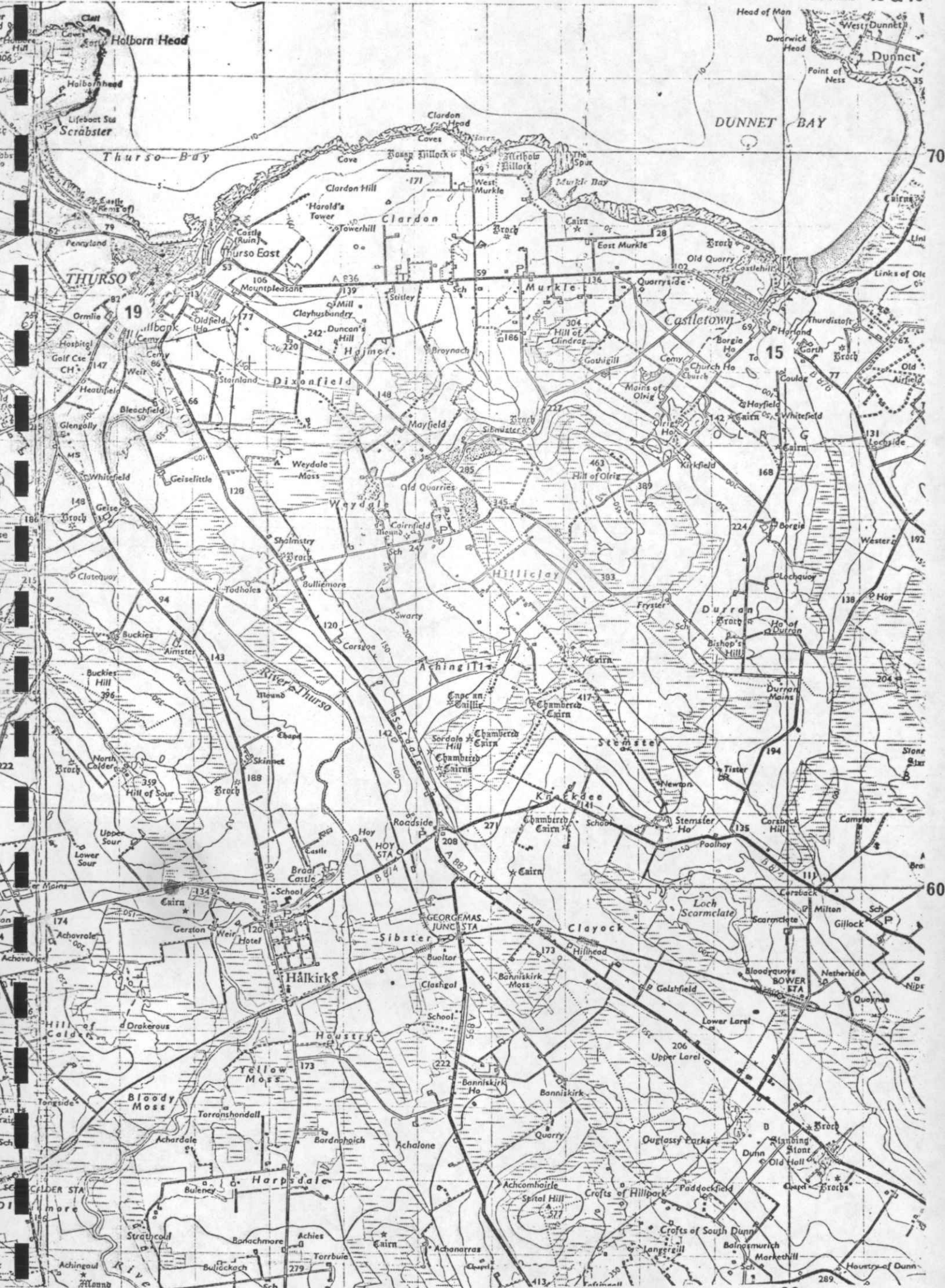




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CARABIDAE

Cychrus caraboides (L.) s. rostratus (L.)

(13a) 3/8, 1 among Ammophila arenaria.

Carabus nemoralis Muell.

(1a) 9/8, in dunes (G.E.W.).

C. problematicus Hbst. s. gallicus Gehin

(9) 7/8, 1 in flood refuse.

Leistus fulvibarbis Dej.

(4) 2/8, 1 at roots of Iris pseudacorus.

L. rufescens (F.)

(10d) 5/8, 1 in Sphagnum at 1500 ft., (9) 7/8, 1 in food refuse, (7b) 8/8, 1 under stone.

Nebria brevicollis (F.)

(16) 3/8, 1 in straw bale, (9) 7/8, common in flood refuse, (7b) 8/8, 1 under stone.

N. gyllenhali (Schoen.)

(5) 31/7, 2 under stones by R. Strathy, (4) 2/8, 2 under stones by river, (10c) 5/8, 1 under stone at 1900 ft, (1f) 6/8, 2 under stones by R. Strathy.

N. salina Fairm. & Lab.

(1a) 28/7, 1 in dunes.

Notiophilus aquaticus (L.)

(1a) 28/7, 1 (P.J.C.) 1 under old cow dung, (1b) 28/7, 1 running by loch, (5) 31/7, 1 under stone by R. Strathy, (9) 7/8, 3 in flood refuse, (1a) 9/8, 1 in dunes (G.E.W.).

N. biguttatus (F.)

(1b) 28/7, 1 under drift wood on beach, (5) 31/7, 1 under stone by R. Strathy, (8) 1/8, 4 in moss, (13a) 3/8, 1 in fixed dunes, (9) 7/8, 18 adults and 1 larva in flood refuse.

N. germinyi Fauv.

(10c) 5/8, 1 under stone at 1700 ft.

Elaphrus cupreus Duft.

(12) 29/7, 1 running on shore of loch (P.J.C.), (5) 31/7, 1 among stones by R. Strathy, (9) 7/8, 9 adults and 1 larva in flood refuse.

Loricera pilicornis (F.)

(5) 31/7, a and 1 under stones by R. Strathy, 1 larva in Sphagnum, (6) 2/8 1 in old straw heap, (9) 7/8, 7 adults and 3 larvae in flood refuse.

Dyschirius globosus (Hbst.)

(9) 7/8, 11 in flood refuse.

Clivina fossor (L.)

(1b) 28/7, 1 under drift wood on beach.

Broscus cephalotes (L.)

(1b) 28/7, adults and larvae common under driftwood on beach, (4) 31/7, 1 larva under seaweed.

Patrobus assimilis Chaud.

(1b) 4/8, 2 in moss by loch, (10c) 5/8, 1 under stone at 1900 ft, (9) 7/8, 11 in flood refuse.

Trechus (s.str.) obtusus Er.

(5) 31/7, 1 in Sphagnum, (8) 1/8, 4 in moss, (13 a & b) 3/8, 2 among Ammophila, 1 under driftwood, (1b) 4/8, 2 in detritus on shore of loch, (10c) 5/8, 3 in dry moss at 1700 ft, (1b) 6/8, 2 at roots of plants (E.C.P-C.), (1e) 6/8, 1 in sheep dung, (1f) 6/8, 4 in moss and leaf litter, (1g) 6/8, 1 in Juncus, (9) 7/8, 9 in flood refuse, (3) 9/8, 3 in wet mouldy hay.

T. (s.str.) quadristriatus (Schr.)

(8) 1/8, 1 in moss, (9) 7/8, 3 in flood refuse.

Bembidion (Bembidionetolitskya) atroceruleum Steph.

(5) 31/7, 1 under stone by R. Strathy.

B. (Peryphus) femoratum Stm.

(1b) 6/8, 1 at roots of plants (E.C.P-C.), 1 in dunes (G.E.W.).

B. (Peryphus) tetracolum Say

(9) 7/8, 1 in flood refuse.

B. (Philochthus) guttula (F.)

(4), 2/8, 2 at roots of Iris.

B. (Philochthus) unicolor Chaud.

(9) 7/8, 1 in flood refuse.

Pterostichus diligens (Stm.)

(10d) 5/8, 1 in Sphagnum at 1500 ft.

P. niger (Schall.)

(7b) 8/8, 1 under bark of fallen Pinus.

P. nigrita (Pk.)

(1a), 1 under stone in saltmarsh, (9) 7/8, common in flood refuse.

P. strenuus (Pz.)

(8) 1/8, 4 in moss, (16) 3/8, 1 under stone at edge of field, (9) 7/8, 8 in flood refuse.

Calthus erratus Sahlb.

(1a) 28/7, 2 under stones, (1b) 60/8 1 at roots of plants (E.C.P-C.).

C. fuscipes Goetz.

(1a) 28/7, 1 on dead sheep (P.J.C.), (1b) 28/7, 1 on dead sheep in dunes, (4) 31/7, 1 sweeping behind dunes, (2) 2/8, 1 in old straw heap, (9) 7/8, 3 in flood refuse.

C. melanocephalus (L.)

(4) 31/7, 1 under stone, (9) 7/8, 2 in flood refuse.

C. mollis (Marsh.)

(1b) 28/7, 2 on dead sheep in dunes, (4) 31/7, 1 under stones, (13a) 3/8, 2 in fixed dunes, (1b) 6/8, 2 in dunes (G.E.W.), (9) 7/8, 1 in flood refuse.

Agonum gracile Stm.

(5) 31/7, 2 in Sphagnum.

A. muelleri (Hbst.)

(16) 3/8, 1 under stone at edge of field, (9) 7/8, 7 in flood refuse.

Amara aulica (Pz.)

(3) 9/8, 1 sweeping.

A. bifrons (Gyll.)

(4) 28/7, 1 under stone.

A. lunicollis Schiodte

(9) 7/8, 1♂ in flood refuse.

Harpalus (s.str.) latus (L.)

(7b) 30/7, 2♂♂ under stone, (9) 7/8, 9 in flood refuse.

Trichocellus cognatus (Gyll.)

(8) 1/8, 18 in moss.

T. placidus (Gyll.)

(8) 1/8, 15 in moss.

Bradycellus collaris (Pk.)

(9) 7/8, 1♂ 2♀♀ in flood refuse.

B. harpalinus (Serv.)

(15) 3/8, 1♂ under bark of fallen Fagus.

B. ruficollis (Steph.)

(5) 31/7, 3 in Sphagnum, (8) 1/8, 4 in moss.

B. verbasci (Duft.)

(9) 7/8, 2♂♂ 3♀♀ in flood refuse.

Dromius sp.

(9) 7/8, 1 indet. larva in flood refuse.

HALIPLIDAE

Haliphus lineatocollis (Marsh.)

(4) 2/8, 1♀ in small pool in dunes.

DYTISCIDAE

Hydroporus nigrita (F.)

(1b) 4/8, few in loch, (5) 31/7, 1 by treading Sphagnum, (10c) 5/8, 1♂ in pool at 1900 ft.

H. obscurus Stm.

(5) 31/7, 1 by treading Sphagnum.

H. pubescens (Gyll.)

(5) 31/7, 2 by treading Sphagnum, (4) 2/8, 10 by treading emergent vegetation in pool in dunes, (10c) 5/8, 7 in pools at 1900 ft., (9) 7/8, 1 in flood refuse.

Platambus maculatus (L.) including var. inornatus Sahlb.

(1b) 4/8, 2 in loch, (5) 31/7, 1 under stone by R. Strathy, (10c) 5/8, 3 in pool at 1900 ft, (1g) 6/8, 1 under stones at edge of Loch Mer.

Agabus bipustulatus (L.)

(1a) 4/8, 1 in brackish pool in saltings by River Borgie, (1b) 4/8, 1 in loch, (10c), 5/8, 1♂ 1♀ in pools at 1900 ft.

A. guttatus (Pk.)

(1a) 28/7, 1 under stones in dry streambed, (5) 31/7, 3 under stones by R. Strathy, (8) 1/8, 2 in stream, (4) 2/8, 1 in moss, 2 by treading emergent vegetation, 2 in small pool in dunes. (1a) 4/8, 1 in brackish pool by R. Borgie.

A. melanocornis Zimm.

(1b) 4/8, 3♂♂ in loch, (9) 7/8, 1♀ in flood refuse, (10c) 5/8, 1♀ in pool at 1900 ft.

Rhantus ?exsoletus (Forst.)

(10c) 5/8, 1 larva in small peat pool at 1900 ft.

GYRINIDAE

Gyrinus natator (L.)

(4) 2/8, 1♂ 1♀ on small pool in dunes, (10c) 5/8, 1♂ 2♀♀ on pool at 1900 ft.

HYDROPHILIDAE

Helophorus aquaticus (L.)

(4) 2/8, 2♂♂ 2♀♀ in small pool in dunes, (9) 7/8, 11 in flood refuse.

H. brevipalpis Bedel

(1g) 6/8, 1 sweeping Iris etc. in stream, (9) 7/8, abundant in flood refuse, (3) 9/8, 3 in wet mouldy hay.

H. flavipes (F.)

- (4) 2/8, very common by treading emergent vegetation in small pool in dunes,
(9) 7/8, abundant in flood refuse.

H. granularis (L.)

- (1g) 6/8, 1♀ sweeping.

Coelostoma orbiculare (F.)

- (1b) 4/8, 1 in detritus on shore of loch, (9) 7/8, 2 in flood refuse.

Sphaeridium bipustulatum F.

- (9) 7/8, 4 in flood refuse.

S. scarabaeoides L.

- (9) 7/8, 2♂ 1♀ in flood refuse.

Cercyon atomarius (F.)

- (5) 31/7, 1 on the wing, (1e) 6/8, 2 in sheep dung, (9) 7/8, common in flood refuse.

C. haemorrhoidalis (F.)

- (2) 2/8, 2 in old straw heap, (4) 2/8, 1 on dead rabbit, (6) 2/8, 7 in old straw heaps, (9) 7/8, common in flood refuse.

C. littoralis (Gyll.)

- (1b) 28/7, 11 on dead gulls on foreshore, 2 under driftwood, abundant in seaweed, (4) 31/7, common in dead gulls and seaweed, (13b) 3/8, 3 in dead gulls, 2 in seaweed, (7a) 8/8, common in seaweed.

C. melanocephalus (L.)

- (1a) 28/7, 1 in sheep dung in dunes, (10c) 5/8, 2 sweeping 1500-2300 ft (G.E.W.), (1g) 6/8, 1 sweeping, (1a) 6/8, 1 in cow dung, (1e) 6/8, 2 in sheep dung, (9) 7/8, very common in flood refuse.

C. pygmaeus (Ill.)

- (9) 7/8, 1♀ in flood refuse.

C. terminatus (Marsh.)

- (9) 7/8, 1♂ 2♀♀ in flood refuse.

Megasternum obscurum (Marsh.)

- (2) 2/8, 1 in old straw heap, (4) 2/8, 1 sweeping, 1 on dung in dunes, (6) 2/8, 1 in old straw heaps, (1a) 6/8, 1 in cow dung, (1g) 6/8, 1 sweeping by Loch Mer, (4) 7/8, 3 in cut grass, 1 under stone (7b) 8/8, 5 in heap of cut grass and bracken, (9) 7/8, abundant in flood refuse, (3) 9/8, 3 in wet mouldy hay.

Cryptopleurum minutum (F.)

- (6) 2/8, 3 in old straw heaps, (16) 3/8, 1♀ in straw bale, (1d) 6/8, 1 in sheep dung, (9) 7/8, 4 in flood refuse.

Paracymus scutellaris (Rosen.)

- (9) 7/8, 1 in flood refuse.

Anacaema globulus (Pk.)

(1b) 4/8, 4 in loch, (5) 31/7, 2 under stones by R. Strathy, 1 by treading Sphagnum, (4) 2/8, 3 in moss, (1b) 4/8, 2 in detritus on shore of loch, 2 in moss by loch, (10d) 5/8, 6 in Sphagnum at 1500 ft, (1g) 6/8, 1 in Juncus, (9) 7/8, common in flood refuse.

Laccobius biguttatus Gerh.

(1b) 4/8, 1 in detritus on shore of loch.

Helochaetes obscurus (Muell.)

(5) 31/7, 1 treading Sphagnum.

Chaetarthria seminulum (Hbst.)

(9) 7/8, 9 in flood refuse.

HISTERIDAE

Hister unicolor L.

(1b) 28/7, 1 on dead sheep in dunes.

HYDRAENIDAE

Ochthebius dilatatus Steph.

(9) 7/8, 1♂ in flood refuse.

Limnebius truncatellus (Thn̄b.)

(1a) 28/7, 1 under stone in dry stream bed, (1b) 4/8, 1 in moss by loch, 1♂ in loch, (1g) 6/8, 1 under stone at edge of Loch Mer, (9) 7/8, 11 in flood refuse.

PTILIIDAE

Ptenidium nitidum (Heer)

(9) 7/8, few in flood refuse.

P. punctatum (Gyll.)

(13b) 3/8, 3 under driftwood.

P. pusillum (Gyll.)

(6) 2/8, 3♂ in old straw heap, (1f) 6/8, 1 in leaf litter, (1g) 6/8, 1 in Juncus, 9/8, 1♂ 1♀ in hay in barn.

Ptinella cavelli (Broun)

(15) 3/8, common under bark of fallen Fagus, (16) 3/8, 5 under bark of Fagus log.

Acrotrichis atomaria (Deg.)

(2) 2/8, 2♂ 1♀ in old straw heap, (4) 2/8, 1 in moss, (1f) 6/8, 13 in leaf litter, (9) 7/8, few in flood refuse.

A. grandicollis (Man.)

(9) 7/8, few in flood refuse, (3) 9/8, 1♀ in wet mouldy hay.

A. intermedia (Gillm.)

(8) 1/8, 1♂ 1♀ in moss, (7b) 8/8, 1♀ in Chantarelle, 1♀ in Hypholoma fasciculare, 1♂ 2♀♀ in Russula.

A. rugulosa Rossk.

(9) 7/8, 1♀ in flood refuse.

LEIODIDAE

Leiodes dubia (Kug.)

(6) 2/8, 1♀ by sweeping, (1a) 9/8, 1♂ in dunes (G.E.W.), (9) 7/8, 10 in flood refuse.

Agathidium laevigatum Er.

(9) 7/8, 1♂ 1♀ in flood refuse.

A. marginatum Stm.

(9) 7/8, 1♂ in flood refuse.

Nargus wilkini (Spence)

(8) 1/8, 1♀ in moss, (1f) 6/8, 2♂♂ 3♀♀ in moss and leaf litter.

Choleva jeanneli Brit.

(8) 1/8, 1 in moss.

Sciodrepoides fumatus (Spence)

(7b) 8/8, 1♀ in Russula.

Catops grandicollis Er.

(1b) 28/7, 1♂ on dead sheep in dunes, (1a) 4/8, 1♂ in dead sheep, (10c) 5/8, 1♂ 1♀ sweeping 1500-2300 ft (G.E.W.), (1a) 6/8, 11 in dead sheep.

C. morio (F.)

(4) 2/8, 1♀ at roots of Juncus, (1b) 4/8, 1♀ in detritus on shore of loch, (7b) 8/8, 1♀ in sheep dung.

SILPHIDAE

Nicrophorus investigator Zett.

(2) 28-29/7, 3; 5-6/8, 1, in light trap (E.C.P-C.).

Necrodes littoralis (L.)

(2) 28-29/7, 1 in light trap (E.C.P-C.).

Thanatophilus rugosus (L.)

(1b) 28/7, 1 on dead gull on foreshore, 2 on dead sheep in dunes.

T. sinuatus (F.)

(13a) 3/8, 1 dead on dunes.

SCYDMAENIDAE

Neuraphes angulatus (Muell. & Kunze)

(9) 7/8, 1♂ 1♀ in flood refuse.

Stenichnus bicolor (Denny)

(7b) 30/7, 1 under bark of fallen Fagus.

S. collaris (Muell. & Kunze)

(1f) 6/8, 1 in leaf litter, (9) 7/8, 1♂ 6♀♀ in flood refuse.

STAPHYLINIDAE

Megarthus denticollis (Beck)

(9) 7/8, 1♂ in flood refuse, (3) 9/8, 2♂♂ 1♀ in wet mouldy hay.

M. depressus (Pk.)

(1a) 28/7, 1 in cow dung, (10c) 5/8, 2 sweeping flushes at 1700 ft, 1♂ in sheep dung at 1550 ft, (1a) 6/8, 2 in cow dung, (1a) 6/8, 1 in sheep dung, (9) 7/8, common in flood refuse, (7b) 8/8, 2 in Hypholoma fasciculare, (3) 9/8, 1♀ in wet mouldy hay.

M. sinuatocollis (Boisd. & Lac.)

(3) 9/8, 1♀ in wet mouldy hay.

Proteinus brachypterus (F.)

(7b) 8/8, 1 in Boletus, (11) 9/8, 1♀ in Polytrichum (H.L.G.S.).

Anthobium atrocephalum (Gyll.)

(9) 7/8, 1 in flood refuse.

Olophrum fuscum (Gr.)

(4) 2/8, 2 at roots of Iris, (10d) 5/8, 2 in Sphagnum at 1500 ft, (9) 7/8, 3 in flood refuse.

Lesteva heeri Fauv.

(5) 31/7, 1 treading Sphagnum, (4) 2/8, 1 at roots of Iris, (1b) 4/8, 3 in moss at base of Juncus, (1g) 6/8, 1 in Juncus, (9) 7/8, 2 in flood refuse.

L. longoelytrata (Goez.)

(1g) 6/8, 1 in Juncus, (9) 7/8, 1 in flood refuse.

Geodromicus longipes (Mann.)

(10c) 5/8, 1 under stone at 1900 ft.

G. nigrita (Muell.)

(9) 7/8, 1♂ in flood refuse.

Anthophagus alpinus (Pk.)

(10c) 5/8, common sweeping at 2300ft near summit (G.E.W.).

Eusphalerum luteum (Marsh.)

(1a) 28/7, 1 among dunes (G.E.W.), 6 sweeping Salix repens, 2 on S. aurita, (1b) 4/8, 7 on Thymus flowers, 1 on fern, (1b) 6/8, 3 sweeping by loch (G.E.W.).

E. minutum (F.)

(10c) 5/8, 3♂ 1♀ sweeping flushes at 1700 ft.

Acrulia inflata (Gyll.)

(7b) 30/7, 8 under bark of fallen Fagus.

Phyllodrepa floralis (Pk.)

(14) 3/8, 1 on Umbel flowers.

Dropephylla grandiloqua (Luz.)

(16) 3/8, 1 under bark of Fagus log.

D. heeri (Heer)

(7b) 30/7, 1 in Piptoporus betulinus on dead standing Betula.

Omalium caesum Gr.

(2) 2/8, 1 in old straw heap, (13a) 3/8, 1♂ at roots of Ammophila.

O. excavatum Steph.

(6) 2/8, 2 in old straw heaps.

O. laeviusculum Gyll.

(13b) 3/8, 3 in dead gulls, 2 in seaweed, 1 under driftwood, (7a) 8/8, 1 in seaweed.

O. oxyacanthae Gr.

(3) 9/8, 1♀ in wet mouldy hay.

O. riparium Th.

(4) 31/7, 2 in seaweed, 1 in dead gull.

O. rugulipenne Rye

(1b) 28/7, 2 on dead gulls on foreshore, 1 in seaweed.

Phloeostiba lapponica (Zett.)

(7b) 30/7, 4 under bark of fallen Fagus.

Bledius longulus Er.

(13a) 3/8, 1 in hollow in dunes.

Thinobius bicolor Joy

(9) 7/8, 1♂ in flood refuse.

Aploderus caelatus (Gr.)

(9) 7/8, 1 in flood refuse.

Platystethus arenarius (Fourc.)

(2) 2/8, 1 in old straw heap, (1g) 6/8, 1 sweeping near Loch Mar, (9) 7/8, 3 in flood refuse.

Anotylus maritimus Th.

- (1b) 28/7, 4 in dead gulls, 4 in seaweed, 9 under driftwood on beach,
(4) 31/7, 8 in seaweed, common in dead gulls, (13b) 3/8, common in
dead gulls, 1 in seaweed, 3 under driftwood.

A. rugosus (F.)

- (9) 7/8, 7 in flood refuse.

A. sculpturatus (Gr.)

- (1a) 6/8, 2♂♂ in dead sheep, (1g) 6/8, 1 sweeping.

A. tetrocarinatus (Block)

- (3) 9/8, 3 in wet mouldy hay.

Oxytelus laqueatus (Marsh.)

- (5) 31/7, 1♂ on the wing, (8) 1/8, 2 in sheep dung, (13a) 3/8, 1 in
cow dung, (1a) 6/8, 1 in cow dung, (1e) 6/8, 4 in sheep dung, (9) 7/8,
10 in flood refuse.

Stenus bifoveolatus Gyll.

- (4) 2/8, 1♀ by treading emergent vegetation, (10a) 5/8, 1♂ in moss at
2300 ft near summit, (1a) 9/8, 1♂ in dunes (G.E.W.).

S. brunnipes Steph.

- (7b) 30/7, 1♀ under stone, (2) 2/8, 4 in old straw heap, (4) 2/8, 1♀
in moss, (16) 3/8, 2 in straw bale, (13a) 3/8, 1♂ 2♀♀ at roots of
Ammophila, (1b) 4/8, 1♀ in moss at base of Juncus, (1f) 6/8, 2 in
Juncus, (4) 7/8, 1 in cut grass, (7b) 8/8, 6 in heap of cut grass and
bracken, (3) 7/8, abundant in flood refuse, (3) 9/8 3 in wet mouldy hay.

S. clavicornis Scop.

- (8) 1/8, 2 in moss, (4) 7/8, 1♀ under stone, (6) 2/8, 1♀ in old straw
heap, (13a) 3/8, 1♀ at roots of Ammophila, (1b) 4/8, 1♀ in moss by
loch, (1f) 6/8, 1 in Juncus, (9) 7/8, very common in flood refuse,
(3) 9/8, 1♂ 1♀ in wet mouldy hay.

S. fulvicornis Steph.

- (7b) 8/8, 1♀ in moss (H.L.G.S.).

S. geniculatus Gr.

- (10a) 5/8, 1♀ in moss at 2300 ft near summit, (9) 7/8, 1♂ in flood
refuse.

S. impressus Germ.

- (12) 29/7, 1♀ on Piptoporus betulinus on Betula, (7b) 30/7, 1♂ 1♀ in
moss (G.E.W.), (8) 1/8, 9 in moss, (13a) 3/8, 4♀♀ in fixed dunes, (1b)
4/8, 2 sweeping ferns, (10d) 5/8, 1♂ 1♀ in Sphagnum at 1500 ft, (10c)
5/8, 1 in dry moss at 1700 ft, (10a) 5/8, 3♂♂ 2♀♀ in moss at 2300 ft
near summit, (1b) 6/8, 1♀ sweeping by loch (G.E.W.), (9) 7/8, 4 in
flood refuse, (11) 9/8, 1♂ in Polytrichum (H.L.G.S.).

S. juno (Pk.)

(4) 2/8, 4♀♀ at roots of Iris, 1♀ treading emergent vegetation, (1b) 4/8, 1 in moss at base of Juncus, (1g) 6/8, 1♀ sweeping.

S. nanus Steph.

(4) 2/8, 2♀♀ in moss, (6) 2/8, 1♂ in old straw heap, (9) 7/8, 2♀♀ in flood refuse.

S. ochropus Kies.

(13a) 3/8, 3♂♂ 1♀ at roots of Ammophila.

S. nitidiusculus Steph.

(5) 31/7, 2♂♂ under stones by R. Naver, (4) 2/8, 1♀ sweeping Equisetum, (1b) 4/8, 2♂♂ in moss by loch, (9) 7/8, very common in flood refuse, (1a) 9/8, 1♂ in dunes (G.E.W.).

S. pallitarsis Steph.

(1b) 4/8, 1 in moss by loch.

S. picipes Steph.

(16) 3/8, 1♂ in straw bale, (13a) 3/8, 1♀ in fixed dunes, (10a) 5/8, 1♂ in moss at 2300 ft near summit, (9) 7/8, common in flood refuse.

S. pubescens Steph.

(12) 29/7, 1♀ on shore of loch.

S. tarsalis Ljungh

(4) 2/8, 1 at roots of Juncus, (1f) 6/8, 1 in Juncus, (1g) 6/8, 1♀ near Loch Mer.

Lathrobium brunnipes (F.)

(8) 1/8, 2♀♀ in moss, (9) 7/8, 1♀ in flood refuse.

Othius angustus Steph.

(2) 2/8, 2 in old straw heap, (10c) 5/8, 4 in dry moss, 2 under stones at 1700 ft, (1f) 6/8, 2 in moss, (7b) 8/8, 1 in moss (H.L.G.S.), (9) 7/8, 6 in flood refuse, (1a) 9/8, 1 under stone in dunes, (3) 9/8, 1 under stone in dunes.

O. laeviusculus Steph.

(4) 31/7, 1 sweeping behind dunes, (8) 1/8, 2♂♂ in moss, (6) 2/8, 1 in old straw heap.

O. myrmecophilus Kies.

(4) 31/7, 1 under stone.

Othius punctulatus (Goeze)

(8) 1/8, 1♀ in moss, (6) 2/8, 1 in old straw heap, (9) 7/8, 1 in flood refuse.

Gyrophypnus fracticornis (Muell.)

(1g) 9/8, 1♀ in hay in barn.

Atrechus affinis (Pk.)

(7b) 30/7, common under bark of fallen Pinus.

Xantholinus glabratus (Gr.)

(1a) 28/7, 1 sweeping Salix repens, (2) 2/8, 1♂ in straw heap, (6) 2/8, 1 in old straw heap, (9) 7/8, 1 in flood refuse, (1d) 6/8, 1 in sheep dung, (3) 9/8, 1 in cut hay.

X. laevigatus Jacob.

(1a) 28/7, 2♀♀ among dunes (G.E.W.), 1 under stone in dry stream bed, (1b) 28/7, 1 under driftwood on beach, 1♂ on dead sheep in dunes, (13a) 3/8, 1 in fixed dunes.

X. linearis (Ol.)

(1b) 28/7, 1♂ 1♀ under driftwood on beach, (4) 31/7, 1 under seaweed, (1b) 6/8, 1 at roots of plants (E.C.P-C.), (4) 7/8, 1 in cut grass, (9) 7/8, 8 in flood refuse.

Philonthus cognatus Steph.

(9) 7/8, 5 in flood refuse.

P. decorus (Gr.)

(7b) 8/8, 1 under stone.

P. fimetarius (Gr.)

(1b) 28/7, 1♂ on dead sheep in dunes, (2) 2/8, 3♀♀ in old straw heap, (6) 2/8, 1♀ in old straw heap, (9) 7/8, 3♂♂ 3♀♀ in flood refuse, (1g) 9/8, 2♂♂ 4♀♀ in hay in barn, (3) 9/8, 2♂♂ in wet mouldy hay.

P. laminatus (Creutz.)

(9) 7/8, 6 in flood refuse. (3) 9/8, 1♀ in wet mouldy hay.

P. marginatus (Stroem)

(13a) 3/8, 1 in cow dung, (9) 7/8, 3 in flood refuse.

P. politus (L.)

(1b) 28/7, 1♂ on dead sheep in dunes, (1a) 6/8, 2♀♀ in dead sheep, (3) 9/8, 1♂ in wet mouldy hay.

P. sordidus (Gr.)

(1b) 28/7, 1♂ on dead sheep in dunes, (2) 2/8, 1♂ 3♀♀ in old straw heap, (6) 2/8, 2♀♀ in old straw heap, (1g) 9/8, 3♂♂ 2♀♀ in hay in barn.

P. varians (Pk.)

(2) 2/8, 1♂ in old straw heap, (9) 7/8, 7 in flood refuse, (3) 9/8, 3♂♂ 2♀♀ in wet mouldy hay.

P. varius (Gyll.)

(2) 2/8, 1♂ in old straw heap, (9) 7/8, 9 in flood refuse, (3) 9/8, 1♀ in cut hay (G.E.W.), 4♂♂ 3♀♀ in wet mouldy hay.

Gabrius trossulus (von Nord.)

(9) 7/8, abundant in flood refuse, together with 1 larva probably of this species.

Cafius xantholoma (Gr.)

(1b) 28/7, 1 in dead gull on foreshore, 6 in seaweed, (4) 31/7, 3 in seaweed, (13b) 3/8, 2 in seaweed, (7a) 8/8, 1 in seaweed.

Staphylinus aeneocephalus Deg.

(7b) 30/7, 1 under stone, (1d) 6/8, 1♂ under stone, (9) 7/8, 5 in flood refuse, (1a) 9/8, 1♂ under stone in dunes, (3) 9/8, 1♀ under stone in dunes.

S. brunnipes F.

(4) 31/7, 1♀ under stone.

S. erythropterus L.

(9) 7/8, 1 in flood refuse.

S. globulifer Fourc.

(3) 9/8, 1♂ under stone in dunes.

Creophilus maxillosus (L.)

(1b) 28/7, adults and larvae on dead sheep in dunes.

Quedius boopoides Munst.

(16) 3/8, 1♀ under stone at edge of field, (10c) 5/8, 1♀ in dry moss at 1700 ft, (7b) 8/8, 2♀♀ in heap of cut grass and bracken.

Q. boops (Gr.)

(9) 7/8, 1♂ 2♀♀ in flood refuse.

Q. cinctus (Pk.)

(2) 2/8, 3♀♀ in old straw heap, (9) 7/8, 1 in flood refuse.

Q. curtipennis Bern.

(4) 2/8, 2♂♂ in moss, (9) 7/8, 3♂♂ 6♀♀ in flood refuse, (7b) 8/8, 1♂ in heap of cut grass and bracken.

Q. fulvicollis (Steph.)

(4) 2/8, 1♂ in moss.

?Q. invreae Grid./puncticollis (Th.)

(4) 2/8, 2 larvae in mole's nest are most probably one or other of these species.

Q. lateralis (Gr.)

(12) 29/7, 1♀ on Piptoporus betulinus on Betula, (7b) 8/8, 1 in Chantarelle, 1 in Hypholoma fasciculare.

Q. maurorufus (Gr.)

(13a) 3/8, 1♀ at roots at Ammophila, (1b) 4/8, 4♂♂ in detritus on shore of loch, (9) 7/8, 1♂ 1♀ in flood refuse.

Q. mesomelinus (Marsh.)

(1g) 9/8, 19 in hay in barn.

Q. molochinus (Gr.)

(7b) 30/7, 1♂ in moss (G.E.W.), (8) 1/8, 1♀ in moss, (13a) 3/8, 1♀ at roots of Ammophila.

Q. nigriceps Kr.

(1f) 6/8, 1♂ in moss, (9) 7/8, 1♂ 2♀♀ in flood refuse.

Q. nitipennis Steph.

(9) 7/8, 6♂♂ 7♀♀ in flood refuse.

Q. plagiatus Mann.

(15) 3/8, 1♀ under bark of fallen Fagus.

Q. scintillans (Gr.)

(2) 2/8, 1 in old straw heap, (6) 2/8, 1♀ in old straw heap, (7b) 8/8, 1♂ in heap of cut grass and bracken, (1g) 9/8, 1♂ 1♀ in hay in barn, (3) 9/8, 2♂♂ in cut hay (G.E.W.).

Q. semiaeneus (Steph.)

(6) 2/8, 1♀ in old straw heap.

Q. semiobscurus (Marsh.)

(2) 2/8, 1♀ in old straw heap. (6) 2/8, 1♀ in old straw heap, (9) 7/8, 4♂♂ 7♀♀ in flood refuse, (3) 9/8, 1♂ 1♀ in dead Gannet.

Q. tristis (Gr.)

(4) 31/7, 1♂ under stone behind dune, (2) 2/8, 3♂♂ 1♀ in old straw heap, (3) 9/8, 1♂ 1♀ under stones in dunes.

Q. umbrinus Er.

(4) 2/8, 2♂♂ 2♀♀ in moss, (13a) 3/8, 2♀♀ at roots of Ammophila.

Mycetoporus clavicornis (Steph.)

(9) 7/8, 4 in flood refuse.

M. splendidus (Gr.)

(11) 9/8, 1♂ in Polytrichum (H.L.G.S.).

Lordithon lunulatus (L.)

(7b) 8/8, 4 in Hypholoma fasciculare, 1 in Boletus.

L. thoracicus (F.)

(1a) 28/7, 1 on Salix aurita, (8) 1/8, 1 in fungus, (7b) 8/8, 13 in H. fasciculare, 1 in Russula, common in Boletus.

Tachyporus atriceps Steph.

(6) 2/8, 1 in old straw heap.

T. chrysomelinus (L.)

(8) 1/8, 1 in moss, (2) 2/8, 3 in old straw heap, (6) 2/8, 1 in old straw heap, (13a) 3/8, 1 at roots of Ammophila, (4) 7/8, 2 in cut grass, (9) 7/8, common in flood refuse, (7b) 8/8, 3 in heap of cut grass and bracken, 1 in moss (H.L.G.S.), (3) 9/8, 1 (teneral) in wet mouldy hay.

T. hypnorum (F.)

(1g) 6/8, 2 sweeping, (9) 7/8, 1 in flood refuse, (7b) 8/8, 1 in heap of cut grass and bracken.

T. obtusus (L.)

(1g) 6/8, 1 in Juncus, 2 sweeping.

T. pusillus Gr.

(2) 2/8, 1 in old straw heap.

Tachyporus spp.

(9) 7/8, 3 indet. larvae in flood refuse.

Tachinus elongatus Gyll.

(1b) 6/8, 1 in dunes (G.E.W.), (1a) 9/8, 1♀ in dunes (G.E.W.).

T. humeralis Gr.

(10c) 5/8, 2♂♂ in sheep dung at 1550 ft, (10e) 5/8, 1♂ sweeping at 500-600 ft.

T. laticollis Gr.

(6) 2/8, 1 in old straw heap, (9) 7/8, 2 in flood refuse, (7b) 8/8, 5 in heap of cut grass and bracken.

T. marginellus (F.)

(1a) 28/7, 1♀ in cow dung, (12) 29/7, 1 on Piptoporus betulinus on Betula, (8) 1/8, 2 in moss, common on cow dung, (6) 2/8, 2 in old straw heap, (10c) 5/8, 1 sweeping 1500-2300 ft (G.E.W.), (1e) 6/8, 1♂ sweeping by loch, (1f) 6/8, 1 in moss, (9) 7/8, very common in flood refuse, (7b) 8/8, 1 in Hypholoma fasciculare, common in heap of cut grass and bracken, (3) 9/8, 3 in cut hay (G.E.W.).

T. pallipes (Gr.)

(10c) 5/8, 1♀ in sheep dung at 1550 ft.

T. proximus Kr.

(10c) 5/8, 1♀ in sheep dung at 1550 ft.

T. signatus Gr.

(8) 1/8, 1 in cow dung, (2) 2/8, 4 in old straw heap, (6) 2/8, 2 in old straw heap, (9) 7/8, very common in flood refuse, (7b) 8/8, 9 in heap of cut grass and bracken, (3) 9/8, 5 in cut hay (G.E.W.).

Gymnusa brevicollis (Pk.)

(1b) 4/8, 1 in moss by loch.

Myllaena brevicornis (Matth.)

(5) 31/7, 1 under stone by R. Strathy, (1b) 4/8, 1 in detritus on shore of loch, 1♀ in moss at base of Juncus, (10d) 5/8, 5 in Sphagnum at 1500 ft, (9) 7/8, 4♂♂ 1♀ in flood refuse.

M. dubia (Gr.)

(1b) 4/8, 1♂ in detritus on shore of loch.

M. kraatzi Shp.

(9) 7/8, 1♂ (teneral) in flood refuse.

M. minuta (Gr.)

(9) 7/8, 1♂ 2♀♀ in flood refuse.

Encephalus complicans Steph.

(9) 7/8, 1♂ in flood refuse.

Gyrophæna fasciata (Marsh.)

(7b) 30/7 & 8/8, 9♂♂ 16♀♀ in Hypholoma fasciculare on Fagus stump,
8/8, 1♀ in Russula on Betula log.

Phytosus balticus Kr.

(1b) 28/7, 5 under driftwood on beach, (13b) 3/8, 4 under driftwood.

Leptusa fumida Kr.

(7b) 30/7, 4♂♂ 2♀♀ under bark of fallen beech, 3 in Piptoporus
betulinus on dead standing Betula, 1 in Trametes on Fagus stump.

L. norvegica Strand

(15) 3/8, 1♀ under bark of fallen Fagus.

Bolitochara pulchra (Gr.)

(7b) 8/8, 2♂♂ in H. fasciculare.

Autalia impressa (Ol.)

(8) 1/8, 1 in human faeces, (7b) 8/8, 2 in H. fasciculare, 2 in
Trametes on Fagus stump, 2 in Russula, 1 in Boletus.

A. puncticollis Shp.

(8) 1/8, 1 in moss, (10c) 5/8, 1 in sheep dung at 1550 ft, (9) 7/8,
1 in flood refuse.

A. rivularis (Gr.)

(8) 1/8, 1 in human faeces, (9) 7/8, 1 in flood refuse.

Falagria sulcata (Gr.)

(6) 2/8, 1 in old straw heap.

F. thoracica Steph.

(1b) 4/8, 3 under stones, 6/8, 1 sweeping near loch (G.E.W.), (1a)
6/8, 2 in dead sheep.

Boreophilia islandica (Kr.)

(8) 1/8, 2 ♂♂ in moss, (4) 2/8, 1♀ in moss, (10c) 5/8, 1♀ in dry moss
at 1700 ft, 1♀ under stone at 1900 ft, (1g) 6/8, 3♀♀ in Juncus, (9)
7/8, common in flood refuse.

Aloconota (s.str.) currax (Kr.)

(9) 7/8, 1♀ in flood refuse.

Amischa analis (Gr.)

(1b) 4/8, 1♀ in moss at base of Juncus, (9) 7/8, 2♀♀ in flood refuse.

A. cavifrons (Shp.)

(9) 7/8, common in flood refuse.

Nehemitropia sordida (Marsh.)

(3) 9/8, 1♀ in cut hay (G.E.W.), 1♀ in wet mouldy hay.

Geostiba circellaris (Gr.)

(1b) 28/7, 1♀ under driftwood on beach, (8) 1/8, 1♂ in moss, (9) 7/8, 2♂♂ in flood refuse, (7b) 8/8, 1 in moss (H.L.G.S.).

Liogluta granigera (Kies.)

(8) 1/8, 1♂ in moss, (9) 7/8, 1♂ 1♀ in flood refuse.

L. longiuscula (Gr.)

(1f) 6/8, 1♂ in sheep dung.

Atheta (Philhygra) elongatula (Gr.)

(4) 2/8, 1♂ 1♀ in moss, (9) 7/8, very common in flood refuse.

A. (Philhygra) gyllenhali (Th.)

(8) 1/8, 1♀ in moss.

A. (Philhygra) hygrobia (Th.)

(9) 7/8, 2♂♂ 1♀ in flood refuse.

A. (Philhygra) malleus Joy

(10d) 5/8, 1♀ in Sphagnum at 1500 ft, (9) 7/8, very common in flood refuse.

A. (Philhygra) obtusangula Joy

(9) 7/8, 2♂♂ in flood refuse.

A. (Phyconoma) immigrans Easton

(13b) 3/8, 1♂ in seaweed.

A. (Bessobia) excellens (Kr.)

(8) 1/8, 1♀ in moss, (1b) 4/8, 1♀ in dead gull, (10c) 5/8, 2♂♂ 3♀♀ sweeping 1500-2300 ft (G.E.W.), (9) 7/8, 1♂ in flood refuse.

A. (Bessobia) monticola (Th.)

(3) 9/8, 1♂ 2♀♀ in cut hay (G.E.W.).

A. (Anopleta) corvina (Th.)

(7b) 8/8, 1♂ in Russula.

A. (Microdota) amacula (Steph.)

(1b) 28/7, 1♂ on dead sheep in dunes, (7b) 30/7, 1♂ in Hypholoma fasciculare on beech stump, (2) 2/8, 6♂♂ 3♀♀ in old straw heap, (6) 2/8, 1♂ on dead rabbit, abundant in old straw heaps, (15) 3/8, 2♀♀ in Polyporus squamosus on sycamore, (16) 3/8, 1♀ in straw bale, (1g) 9/8, 9♂♂ 4♀♀ in hay in barn, (3) 9/8, very common in wet mouldy hay.

A. (Microdota) indubia (Shp.)

(9) 7/8, 1♂ 1♀ in flood refuse.

A. (Microdota) liliputana (Bris.)

(10c) 5/8, 1♀ sweeping 1500-2300 ft (G.E.W.).

A. (Microdota) subtilis (Scriba)

(7b) 8/8, 2♂♂ in Trametes on beech stump, 1♀ in Russula.

A. (Pachyatheta) mortuorum Th.

(1a) 6/8, 2♀♀ in cow dung, (1d) 6/8, 1♂ in sheep dung.

A. (Lohse Grp. II) gagatina (Baudi)

(7b) 8/8, 3♀♀ in Hypholoma fasciculare, 1♀ in Trametes on beech stump,

(9) 7/8, 2♂♂ 2♀♀ in flood refuse.

A. (Lohse Grp. II) sodalis (Er.)

(1g) 6/8, 1♂ in Juncus, (9) 7/8, 1♂ in flood refuse, (7b) 8/8, 1♂ 2♀♀ in Trametes on beech stump, 2♂♂ in Boletus.

A. (Lohse Grp. II) tibialis (Heer)

(10c) 5/8, 4♂♂ 2♀♀ in dry moss at 1700 ft, (9) 7/8, common in flood refuse.

A. (Lohse Grp. II) trinotata (Kr.)

(1b) 28/7, 1♂ on dead gull on foreshore, (2) 2/8, 2♀♀ in old straw heap, (6) 2/8, 1♂ in old straw heap, (15) 3/8, 3♂♂ 1♀ in Polyporus squamosus on sycamore, (2) 9/8, 3♀♀ in Blackbird's nest, (1g) 9/8, 1♂ 1♀ in hay in barn, (3) 9/8, 2♂♂ 3♀♀ in cut hay (G.E.W.), common in wet mouldy hay.

A. (Mocyta) clientula (Er.)

(2) 2/8, 1♂ 2♀♀ in old straw heap, (3) 9/8, 1♂ 1♀ in wet mouldy hay.

A. (Mocyta) fungi (Gr.)

(4) 31/7, 4♂♂ 2♀♀ in seaweed, (8) 1/8, 2♀♀ in moss, (4) 2/8, 1♀ in fungus on Ulex branch on ground, (6) 2/8, common in old straw heaps, 1♂ 2♀♀ on dung in dunes, (15) 3/8, 1♂ in bracket fungus on beech stump, (16) 3/8, 1♀ in straw bale, (13a) 3/8, 1♀ in hollow in dunes, (1b) 6/8, 1♀ sweeping near loch (G.E.W.), (1f) 6/8, 1♀ sweeping by Loch Mer, 1 in leaf litter, 4♀♀ on Juncus, (1g) 6/8, common by sweeping, (7b) 8/8, 2♂♂ in heap of cut grass and bracken, 1♀ under stone, (9) 7/8, very common in flood refuse, (3) 9/8, few in wet mouldy hay.

A. (Mocyta) orbata (Er.)

(2) 2/8, 1♀ in old straw heap, (4) 7/8, 8♂♂ 3♀♀ in cut grass.

A. (Acrotona) aterrima (Gr.)

(1a) 28/7, 1♀ among dunes (G.E.W.), (2) 2/8, 5♂♂ 4♀♀ in old straw heap, (9) 7/8, common in flood refuse, (3) 9/8, 9 in cut hay (G.E.W.).

A. (Acrotona) muscorum (Bris.)

(3) 9/8, common in wet mouldy hay.

A. (Acrotona) parvula (Mann.)

(1d) 6/8, 1♀ in sheep dung.

A. (Rhagocneme) subsinuata (Er.)

(1g) 9/8, 1♀ in hay in barn.

A. (Datomicra) celata (Er.)

(9) 7/8, 1♀ in flood refuse.

A. (Datomicra) nigra (Kr.)

(6) 2/8, 1♀ in old straw heap, (1g) 9/8, 2♂ 6♀♀ in hay in barn, (3) 9/8, 4♂ 1♀ in cut hay (G.E.W.), 1♀ in wet mouldy hay.

A. (s.str.) brunneipennis (Th.)

(10c) 5/8, 1♀ sweeping 1500-2300 ft (G.E.W.).

A. (s.str.) castanoptera (Mann.)

(7b) 30/7, 1♀, 8/8, common in Hypholoma fasciculare, ♂♂ and ♀♀ in Trametes on Fagus stump, 1♀ in Russula and Boletus, (9) 7/8, 2♀♀ in flood refuse.

A. (s.str.) graminicola (Gr.)

(4) 2/8, 3♂ 7♀♀ in moss, (13) 3/8, 1♂ 2♀♀ at roots of Ammophila, (16) 3/8, 1♂ in straw bale, (1g) 6/8, 5♂ 5♀♀ in Juncus, (9) 7/8, very common in flood refuse.

A. (s.str.) pertyi Heer

(8) 1/8, 1♀ in moss, (4) 2/8, 1♂ 1♀ at roots of Iris, (15) 3/8, 1♀ sweeping roadside verge, (1a) 6/8, 1♂ in dead sheep, (1g) 6/8, 2♀♀ sweeping, (9) 7/8, 1♀ in flood refuse, (7b) 8/8, 1♀ in sheep dung, ♂♂ and ♀♀ in Trametes on Fagus stump and in Boletus, (3) 9/8, common in wet mouldy hay.

A. (Lohse Grp. I) crassicornis (F.)

(6) 2/8, 2♀♀ in old straw heap, (7b) 8/8, 1♀ in Russula, ♂♂ and ♀♀ in Boletus.

A. (Lohse Grp. I) repanda (Muls. & Rey)

(7b) 8/8, 1♂ in Hypholoma fasciculare.

A. (Dimetrota) atramentaria (Gyll.)

(1a) 28/7, common in cow dung, (1b) 28/7, common in dead gulls on foreshore, (5) 31/7, 4♂ 1♀ in cow dung near river, (6) 2/8, 1♂ on dung in dunes, (13a) 3/8, 1♂ in dead gull, abundant in cow dung, (10b & c) 5/8, common in sheep dung at 1300 and 1550 ft, (10c) 5/8, 1♀ sweeping flushes at 1700 ft, 1♀ sweeping at 1500-2300 ft (G.E.W.), (1e) 6/8, 11 in sheep dung, (1g) 6/8, 1♀ in sheep dung, (1a & d) 6/8, common in cow and sheep dung, (9) 7/8, common in flood refuse, (7b) 8/8, 1♂ in Trametes on Fagus stump, (3) 9/8, 1♂ 2♀♀ in wet mouldy hay.

A. (Dimetrota) cinnamoptera (Th.)

(8) 1/8, 1♀ in cow dung, (10c) 5/8, 1♀ sweeping flushes at 1700 ft, 2♀♀ sweeping 1500-2300 ft (G.E.W.).

A. (Dimetrota) ischnocera Th.

(1a) 28/7, 1♀ in cow dung.

A. (Dimetrota) laevana Muls. & Rey

(8) 1/8, 2♂♂ in sheep dung, (7b) 8/8, 1♂ in heap of cut grass and bracken.

A. (Dimetrota) picipennis (Mann.)

(10c) 5/8, 1♀ under stone at 1900 ft.

A. (Dimetrota) puncticollis Benick

(1a) 28/7, common sweeping Salix repens, common in cow and sheep dung, (1b) 28/7, 1♂ 3♀♀ in dead gulls on foreshore, abundant on dead sheep in dunes, (1a) 4/8, common in dung, (10c) 5/8, 2 sweeping 1500-2300 ft G.E.W.), (1a) 6/8, 1♂ in dead sheep, (1b) 6/8, 2♂♂ 1♀ sweeping by loch G.E.W.), (1d) 6/8, 2♂♂ 4♀♀ in sheep dung, (1e) 6/8, 2♂♂ 5♀♀ in sheep dung, (1g) 6/8, 2♂♂ sweeping.

A. (Dimetrota) setigera (Shp.)

(1a) 28/7, 1♂ 1♀ in cow dung, (10b) 5/8, 1♀ sweeping Calluna at 1000 ft, (1a & d) 6/8, common in cow and sheep dung, (1e) 6/8, 1♀ in sheep dung, (1g) 6/8, 1♂ sweeping.

A. (Chaetida) longicornis (Gr.)

(1b) 28/7, 1♀ on dead gull on foreshore, (6) 2/8, 1♂ 1♀ in old straw heap, (16) 3/8, 1♂ in straw bale, (1d) 6/8, 3♂♂ 2♀♀ in sheep dung, (9) 7/8, 1♂ 1♀ in flood refuse, (3) 9/8, 2♂♂ 1♀ in cut hay (G.E.W.), 2♂♂ 1♀ in wet mouldy hay.

A. (Actophylla) marina (Muls. & Rey)

(9) 7/8, 1♂ 2♀♀ in flood refuse.

A. (Thinobaena) vestita (Gr.)

(1b) 28/7, 1♂ 1♀ on dead gull, 5♂♂ 4♀♀ under driftwood on beach, (4) 31/7, 1♂ 1♀ in seaweed, (13b) 3/8, 1♂ under driftwood, 1♂ 1♀ in dead gull, (7a) 8/8, 3♂♂ 7♀♀ in seaweed.

Halobrecta algae (Hardy)

(13b) 3/8, 1♀ in dead gull, (7a) 8/8, 1♂ 2♀♀ in seaweed.

Drusilla canaliculata (F.)

(1a) 28/7, 1 under stone, (5) 31/7, 1 by treading Sphagnum, (9) 7/8, 5 in flood refuse.

Phloeopora testacea (Mann.)

(7b) 30/7, 1♀ under bark of fallen Fagus, 2♂♂ in Trametes on Fagus stump.

Ocalea picata (Steph.)

(4) 2/8, 1♂ in moss, (1b) 4/8, 1♂ in detritus on shore of loch, (10d) 5/8, 1♀ in Sphagnum at 1500 ft, (9) 7/8, 2♂♂ 1♀ in flood refuse.

Ocyusa hibernica (Rye)

(1b) 6/8, 1♂ at roots of plants (E.C.P-C.).

Oxypoda elongatula Aubé

(4) 2/8, 2♀♀ in moss, 1♂ at roots of Iris, (1b) 1♀ in moss at base of Juncus, (1g) 6/8, 1 in Juncus, (9) 7/8, 2♂♂ 1♀ in flood refuse.

O. haemorrhhoa (Mann.)

(1b) 28/7, 1♂ under driftwood on beach, (1g) 9/8, 4♂♂ 3♀♀ in hay in barn, (3) 9/8, 2♂♂ 2♀♀ in wet mouldy hay.

O. islandica Kr.

(4) 7/8, 1♂ 1♀, in cut grass.

O. opaca (Gr.)

(2) 2/8, 8♂♂ 6♀♀ in old straw heaps, (6) 2/8, 5♂♂ 2♀♀ in old straw heap, (1g) 9/8, 1♂ in hay in barn.

O. sericea Heer

(6) 2/8, 1♂ in old straw heap.

O. umbrata (Gyll.)

(6) 2/8, 1♀ in old straw heap, (9) 7/8, 2♀♀ in flood refuse.

O. vittata Maerk.

(9) 7/8, 2♀♀ in flood refuse.

Tinotus morion (Gr.)

(1g) 6/8, 1♀ sweeping, (1a) 6/8, 1 in cow dung.

Aleochara bilineata Gyll.

(1e) 6/8, 1♀ in sheep dung.

A. bipustulata (L.)

(1f) 6/8, 1 in sheep dung.

A. grisea Kr.

(13) 3/8, 1♂ in dead gull, (7a) 8/8, 1♂ 2♀♀ in seaweed.

A. lanuginosa Gr.

(8) 1/8, 1♀ in moss, (2) 2/8, 1♂ in old straw heap, (1f) 6/8, 1♀ sweeping by Loch Mer, (1d) 6/8, 3♂♂ 2♀♀ in sheep dung, (9) 7/8, abundant in flood refuse.

A. obscurella Gr.

(1b) 28/7, common on dead gulls and dead rabbit, 3 in seaweed, 4 under driftwood on beach, (4) 31/7, common in dead gulls, 2/8, 1 in dead gull (E.C.P-C.), (13b) 3/8, abundant in dead gulls, 2 ♀♀ in seaweed, (3) 9/8, 5 in dead Gannet.

A. sparsa Heer

(1b) 28/7, 3♀♀ on dead sheep in dunes, (2) 2/8, 1♀ in old straw heap, (6) 2/8, 2♂♂ in old straw heaps.

PSELAPHIDAE

Biblopectus ambiguus (Reich.)

(9) 7/8, 1♀ in flood refuse.

Bryaxis bulbifer (Reich.)

(9) 7/8, 1♂ in flood refuse.

B. puncticollis (Denny)

(7b) 8/8, 1 in moss (H.L.G.S.), (11) 9/8, 1♂ in Polytrichum (H.L.G.S.).

Brachygluta fossulata (Reich.)

(7b) 30/7, 1♀ under bark of fallen Fagus.

GEOTRUPIDAE

Geotrupes spiniger (Marsh.)

(6) 2/8, 1♂ under sheep dung.

SCARABAEIDAE

Aphodius ater (Deg.)

(1e) 6/8, 2 in sheep dung.

A. contaminatus (Hbst.)

(1e) 6/8, 2 in sheep dung, (9) 7/8, 1 in flood refuse.

A. depressus (Kug.)

(1e) 6/8, 1 in sheep dung.

A. granarius (L.)

(13a) 3/8, 1 in cow dung, (9) 7/8, 4 in flood refuse.

A. lapponum Gyll.

(1a) 28/7, 1 in sheep dung in dunes, (1b) 28/7, 1 on dead sheep in dunes, (10c) 5/8, 1 in sheep dung at 1550 ft, (1a) 6/8, 1 in dead sheep, (1e) 6/8, 4 in sheep dung.

A. rufipes (L.)

(1a) 28/7, 1 in dunes, (2) 28-29/7, 1 in light trap (E.C.P-C.), (8) 1/8, 2 in sheep dung, 2 in cow dung, (13a) 3/8, 3 in cow dung, (1e) 6/8, 1 in sheep dung, (9) 7/8, common in flood refuse.

A. rufus (Moll)

(1a) 28/7, 1 in cow dung, (1b) 28/7, 5 on dead sheep in dunes, (2) 28-29/7, 3 in light trap (E.C.P-C.), (13a) 3/8, 2 in cow dung, (1a) 6/8, 1 in cow dung, (1e) 6/8, 3 in sheep dung.

A. sordidus (F.)

(1a) 28/7, 1 in sheep dung in dunes, (1b) 28/7, 1 under driftwood on beach, (1a) 6/8, 1 in cow dung.

Serica brunnea (L.)

(1a) 28/7, 1 under stone, (13a) 3/8, many dead among dunes, (9) 7/8, 1 in flood refuse.

SCIRTIDAE

Elodes minuta (L.)

(8) 1/8, 1♀ sweeping by stream, (9) 7/8, 2 adults and 5 larvae (of this genus and probably this species) in flood refuse.

Cyphon hilaris Nyholm

(5) 31/7, 1♀ by treading Sphagnum.

C. ochraceus Steph.

(14) 3/8, 8♀♀ by sweeping marshy area, (1b) 6/8, 5 ♂♂5♀♀ sweeping by loch (G.E.W.), (1e) 6/8, common sweeping by loch.

C. padi (L.)

(1e) 6/8, few sweeping by loch.

Cyphon sp.

(9) 7/8, 1 larva in flood refuse.

Hydrocyphon deflexicollis (Muell.)

(9) 7/8, 2 in flood refuse.

BYRRHIDAE

Simplocaria semistriata (F)

(9) 7/8, 1 in flood refuse.

Morychus aeneus (F.)

(1a) 28/7, 2 in sheep dung in dunes, (1b) 6/8, 1 crawling at roots of plants (H.L.G.S.).

Byrrhus pilula (L.)

(1a) 28/7, 1♀ in dunes.

DRYOPIDAE

Dryops auriculatus (Fourc.)

(1a) 28/7, 4 under stones in dry stream bed, (1g) 6/8, 4 under stones at edge of Loch Mer

D. ernesti des Grozis

(4) 2/8, 1 under stones in dry river bed.

ELMIDAE

Limnius volckmari (Pz.)

(9) 7/8, 1 larva in flood refuse.

Oulimnius tuberculatus (Muell.)

(9) 7/8, 1 larva in flood refuse.

ELATERIDAE

Hypnoidus riparius (F.)

(13) 3/8, 1 in fixed dunes, (9) 7/8, 3 in flood refuse.

Zoroachros minimus (Boisd. and Lac.)

(9) 7/8, 9 in flood refuse.

Athous haemorrhoidalis (F.)

(7b) 30/7, 1 under stone, (1g) 6/8, 1 sweeping Iris in stream.

Selatosomus incanus (Gyll.)

(1a) 28/7, 1 sweeping Salix aurita

Agriotes acuminatus (Steph.)

(8) 1/8, 1 in "witch's broom" on Betula.

Denticollis linearis (L.)

(8) 1/8, 1 dead in spider's web on Betula.

CANTHARIDAE

Malthodes flavoguttatus Kies.

(5) 31/7, 2 by sweeping near loch, (10b) 5/8, 2 sweeping at 1100 ft.,
(10c) 5/8, 3♂ 2♀♀ sweeping 1500-2300 ft. (G.E.W.), (10e) 5/8, 3
sweeping 500-600 ft..

Malthodes spp.

(9) 7/8, 4 indet. larvae in flood refuse.

ANOBIIDAE

Anobium punctatum (Deg.)

(2) 31/7, several in house, 2/8, 1 in Bettyhill Hotel.

PTINIDAE

Tipnus unicolor (Pill. & Mitt.)

(2) 9/8, 25 in Blackbird's nest, (1g) 9/8, 3 in House Sparrow's nest,
2♀♀ in hay in barn.

CLERIDAE

Necrobia violacea (L.)

(1a) 28/7, 4 on dead sheep (P.J.C.), (1b) 28/7, 3 on dead sheep, 1 on
dead rabbit in dunes.

NITIDULIDAE

Brachypterus urticae (F.)

(1b) 28/7, 3 on Urtica dioica, (8) 1/8, 9 in moss, (15) 3/8, 4 sweeping roadside verge.

Meligethes aeneus (F.)

(3) 30/7, 1♂ among dunes (P.J.C.), (4) 31/7, 1♂ 3♀♀ on Cakile maritima on foreshore, (14) 3/8, 1♀ on Umbel flowers, (13b) 3/8, 3 on C. maritima (3) 9/8, 1♀ sweeping, (3) 9/8, 2 in wet mouldy hay

M. erythropus (Marsh.)

(4) 31/7, 1♂ 1♀ sweeping behind dunes, (4) 2/8, 1♂ sweeping Equisetum.

M. viridescens (F.)

(8) 1/8, 1♂ 2♀♀ in moss, (14) 3/8, 1♂ 1♀ on Umbel flowers, (1g) 6/8, 2♂♂ 2♀♀ sweeping, (3) 9/8, 3 sweeping.

Epuraea aestiva (L.)

(1a) 28/7, 1♂ on Rosa, (7b) 30/7, 1♂ on flowers (G.E.W.), (16) 6/8, 2♀♀ sweeping by loch (G.E.W.), (1g) 6/8, 1♀ sweeping, (7b) 8/8, 6 on thistle flowers (G.E.W.).

Omosita depressa (L.)

(1b) 28/7, 1 on dead sheep in dunes.

Cychramus luteus (F.)

(7b) 8/8, 1 on Lonicera over stream.

RHIZOPHAGIDAE

Rhizophagus bipustulatus (F.)

(15) 3/8, 1 under bark of fallen Fagus.

R. nitidulus (F.)

(7b) 30/7, 1 under bark of fallen Fagus, 1 in Trametes on Fagus stump.

CRYPTOPHAGIDAE

Cryptophagus dentatus (Hbst.)

(12) 29/7, 4♀♀ on Piptoporus betulinus on Betula (det. G.E.W.), (7b) 30/7, 2 under bark of fallen Fagus, 2 in Trametes on Fagus stump, 1♂ 2♀♀ in P. betulinus on dead standing Betula, (15) 3/8, 7 in Polyporus squamosus on sycamore, 2♂♂ 2♀♀ in bracket fungus on Fagus stump, (16) 3/8, 1♀ in straw bale, (1g) 9/8, 1♂ 1♀ in hay in barn, 2♀♀ in nest of House Sparrow, (3) 9/8, 2♀♀ in wet mouldy hay.

C. pilosus Gyll.

(1g) 9/8, 1♀ in House Sparrow's nest, very common in hay in barn.

C. pseudodentatus Bruce

(1g) 9/8, 1♂ in hay in barn

C. scanicus (L.)

(1g) 9/8, 1♂ in hay in barn, (3) 9/8, in cut hay (leg. & det. G.E.W.),
1♂ 1♀ in wet mouldy hay.

C. setulosus Stm.

(2) 9/8, 1 in Blackbird's nest, (3) 7/8, in cut hay (leg & det. G.E.W.).

Micrambe villosus (Heer)

(1a) 28/7, 1♀ sweeping Salix repens, (1g) 6/8, 1 sweeping.

M. vini (Pz.)

(8) 1/8, 1♂ on Betula (det G.E.W.), (9) 7/8, 3♂ 1♀ in flood refuse.

Antherophagus pallens (L.)

(4) 2/8, 1 in marshy area near graveyard.

Atomaria (Anchicera) apicalis Er.

(2) 2/8, 3 in old straw heaps, (6) 2/8, 4 in old straw heap, (9) 7/8,
abundant in flood refuse, (3) 9/8, 3 in cut hay (G.E.W.).

A. (Anchicera) atricapilla Steph.

(9) 7/8, 1♂ 1♀ in flood refuse, (3) 9/8, common in wet mouldy hay.

A. (Anchicera) lewisi Reitt.

(16) 3/8, 1 in straw bale.

A. (Anchicera) nitidula (Marsh.)

(3) 9/8, common in wet mouldy hay.

COCCINELLIDAE

Coccidula rufa (Hbst.)

(7b) 8/8, 1 beating Pinus (G.E.W.).

Adalia bipunctata (L.)

(4) 2/8, 1 at root of Juncus (P.J.C.)

Coccinella undecimpunctata L.

(1a) 28/7, 1 (P.J.C.), 2 in dunes, (4) 31/7, 3 on Cakile maritima on
fore dunes.

LATHRIDIIDAE

Stephostethus lardarius (Deg.)

(16) 3/8, 1 in straw bale, (9) 7/8, 1 in flood refuse.

Aridius nodifer (Westw.)

(7b) 30/7, 1 in Poptoporus betulinus on dead standing Betula, (15) 3/8,
1 in bracket fungus on Fagus stump.

Lathridius pseudominutus (Strand)

(7b) 30/7, 1 in Poptoporus betulinus on dead standing Betula, (2) 2/8,
3 ♀♀ in old straw heap, (15) 3/8, 1♂ in bracket fungus on Fagus stump,
2 in Polyporus squamosus on sycamore, (16) 3/8, 1♀ in straw bale, (1b)

Lathridius pseudominutus continued

6/8, 1 sweeping by loch (G.E.W.), (9) 7/8, 1♀ in flood refuse, (1g)
9/8, 1♀ in House sparrows nest, (2) 9/8, 2 in Blackbird's nest, (3)
9/8, 4♀♀ in wet mouldy hay.

Enicmus transversus (Ol.)

(1g) 6/8, 1 sweeping.

Corticarina fuscata (Gyll.)

(4) 31/7, 6 in seaweed, 2/8, 1 in dead gull on shore (E.C.P-C.).

CISIDAE

Octotemnus glabriculus (Gyll.)

(7b) 30/7, 2 & 8/8, 4 in Trametes on Fagus stump.

Cis (Orthocis) vestitus Mell.

(7b) 30/7, 1 under bark of fallen Fagus.

C. (s.str.) bidentatus (Ol.)

(15) 3/8, 1♀ in bracket fungus on Fagus stump.

C. (s.str.) boleti (Scop.)

(7b) 30/7 & 8/8, common in Trametes on Fagus stump.

SALPINGIDAE

Rhinosimus planirostris (F.)

(7b) 30/7, 4♂♂ 1♀ under bark of fallen Fagus. (11) 9/8, 1 beating
Alnus (E.C.P-C.),

R. ruficollis (L.)

(7b) 30/7, 6♂♂ 1♀ under bark of fallen Fagus.

SCRAPTIIDAE

Anaspis rufilabris (Gyll.)

(7b) 30/7, 1 on flowers (G.E.W.).

CERAMBYCIDAE

Rhagium bifasciatum F.

(7b) 30/7, 1 & p under bark of fallen Pinus.

CHRYSOMELIDAE

Plateumaris discolor (Pz.)

(4) 2/8, 1 sweeping Equisetum, (1b) 6/8, 3 sweeping by loch (G.E.W.),
(1e) 6/8, 1 sweeping by loch.

Chrysolina hyperici (Forst.)

(1a) 28/7, 1 under stone.

C. staphylea (L.)

(1g) 6/8, 1 in Juncus, (9) 7/8, 2 in flood refuse.

Gastrophysa viridula (Deg.)

(15) 3/8, 2 sweeping roadside verge, (1g) 6/8, 13 sweeping, (3) 9/8, 1 sweeping.

Prasocuris phellandrii (L.)

(4) 2/8, 1 in moss.

Lochmaea crataegi (Forst.)

(1a) 28/7, 3 dead in dunes.

L. suturalis (Th.)

(1b) 28/7, 1 dead in seaweed, (13a) 3/8, 1 dead in dunes.

Longitarsus holsaticus (L.)

(9) 7/8, 1♂ 1♀ in flood refuse.

L. luridus (Scop.)

18) 8/8, 1♂ 3♀♀ on Thymus (E.C.P-C.).

L. melanocephalus (Deg.)

(4) 2/8, 2 among dune vegetation (G.E.W.).

L. succineus (Foud.)

(1g) 6/8, 1♀ sweeping, (9) 7/8, 1♀ in flood refuse.

Psylliodes marcida (Ill.)

(4) 31/7, 3 on Cakile maritima on foreshore.

ATTELABIDAE

Deporaus mannerheimi (Hum.)

(17) 29/7, (8) 1/8, beating Betula (M.G.M.).

APIONIDAE

Apion (Perapion) curtirostre Germ.

(12) 29/7, sweeping Rumex acetosella (M.G.M.).

A. (Perapion) violaceum Kirby

(15) 3/8, 3 sweeping roadside verge, (4) 2/8, sweeping Rumex sp. (M.G.M.)

A. (Erythrapion) frumentarium (Pk.)

(12) 29/7, sweeping Rumex acetosella (M.G.M.).

A. (Ceratapion) carduorum Kirby

(13) 3/8, sweeping thistles behind dunes, (6) 2/8, sweeping Cirsium sp. (M.G.M.).

A. (Ceratapion) onopordi Kirby

(3) 30/7, on Centaurea nigra (M.G.M.), (6) 2/8 general sweeping (M.G.M.).

A. (s.str.) aethiops Hbst.

(4 & 6) 2/8, sweeping Vicia spp., (M.G.M.).

A. (Eutrichapion) loti, Kirby

(1) 28/7, (4) 31/7 and 2/8, under Lotus corniculatus (M.G.M.).

A. (Eutrichapion) spencii Kirby

(3) 9/8, 3 sweeping, (3) 30/7, sweeping Vicia cracca (M.G.M.)

A. (Eutrichapion) vicia (Pk.)

(4) 2/8, 2 in moss, (3) 30/7, sweeping Vicia cracca (M.G.M.), (4 & 6) sweeping Vicia sp. (M.G.M.).

A. (Eutrichapion) virens Hbst.

(3) 2/8, sweeping Trifolium repens (M.G.M.).

A. (Protapion) apricans Hbst.

(8) 1/8, 2 in moss, (3) 9/8, 1 sweeping, (4) 31/7, general sweeping (M.G.M.).

A. (Protapion) assimile Kirby

(3) 30/7 and 2/8, sweeping Trifolium pratense (M.G.M.), (4 & 6) 2/8, general sweeping (M.G.M.).

A. (Protapion) dichroum Bedel

(8) 1/8, 1 in moss, (1g) 6/8, 4 in Juncus, (17) 29/7, sweeping Trifolium repens (M.G.M.), (4) 31/7, under T. repens (M.G.M.), (8) 1/8 general sweeping (M.G.M.), (19) 3/8, sweeping T. repens (M.G.M.), (9) 7/8, 2 in flood refuse.

CURCULIONIDAE

Otiorhynchus arcticus F.

(1a) 28/7, 2 in dunes, (1b) 28/7, 1 on dead sheep in dunes, (10c) 5/8, 1 dead under stone at 1900 ft., (12) 29/7, at roots of Lotus (M.G.M.), (3) 30/7, at roots of Ononis in dunes (M.G.M.).

O. atroapterus (Deg.)

(1a) 28/7, 3 in dunes, (6) 2/8, 1 among dunes, (13a) 3/8, 5 in fixed dunes, (1a) 9/8, 1 under stone in dunes, (1) 28/7, on Ammophila arenaria (M.G.M.), (3) 30/7, (4) 31/7, on dunes (M.G.M.).

O. desertus Rosen

(1a) 28/7, 1 under stone, (1) 28/7, under Empetrum and Arctostaphylos (M.G.M.), (4) 2/8, grubbing in dunes (M.G.M.).

O. nodosus (Muell.)

(1) 5/8, on ferns in fully (leg. G.E.W., det. M.G.M.), (9) 7/8, 1 in flood refuse.

O. ovatus (L.)

(1a) 28/7, 2 in dunes.

O. rugifrons (Gyll.)

(1f) 6/8, 1 in leaf litter, (1) 28/7, under stones (M.G.M.).

O. scaber (L.)

(7b) 30/7, 8 beating Betula, (7b) 30/7, beating mainly Betula (M.G.M.).

O. singularis (L.)

(1a) 28/7, 1 in dunes, (7b) 8/8, 1 beating Betula, (3) 9/8, 1 sweeping, (1) 28/7, (12 & 17) 29/7, beating Betula (M.G.M.), (7b) 30/7, on Urtica dioica (M.G.M.), (3) 30/7, on Heracleum sphondylium (M.G.M.), (6) 2/8, general sweeping (M.G.M.).

Phyllobius argentatus (L.)

(12) 29/7, beating Betula (M.G.M.).

Polydrusus cervinus (L.)

(12) 29/7, beating Betula (M.G.M.)

P. pterygomalis Boh.

(8) 1/8, beating Betula (M.G.M.).

Strophosomus melanogrammus (Forst.)

(1a) 28/7, 1 in dunes, (7b) 8/8, 1 beating Betula, 1 under stone, (12 & 17) 29/7, (7b) 30/7, beating Betula (M.G.M.).

S. sus Steph.

(1a) 28/7, 1 dead in dunes.

Philopodon plagiatus (Schall.)

(1a) 28/7, 4 in dunes, (1) 28/7, in sand dunes (M.G.M.), (4) 31/7, on machair (M.G.M.).

Sitona humeralis Steph.

(3) 9/8, 1♂ sweeping.

S. lepidus Gyll

(13a) 3/8, 1♂ sweeping thistles behind dunes, (17) 29/7, (19) 3/8, sweeping Trifolium repens (M.G.M.), (4) 2/8, general sweeping (M.G.M.)

S. lineellus (Bons.)

(12) 29/7, at roots of Lotus corniculatus (M.G.M.), (3) 30/7, sweeping Ononis sp. (M.G.M.), (4) 31/7-2/8, under L. corniculatus (M.G.M.).

S. sulcifrons (Thunb.)

(3) 2/8, on Trifolium repens (M.G.M.).

S. suturalis Steph.

(7b) 8/8, 1♂ in heap of cut grass and bracken.

Hypera plantaginis (Deg.)

(4) 31/7-2/8, grubbing etc. (M.G.M.), (9) 7/8, 1 in flood refuse.

H. venusta (F.)

(2) 2/8, 1 in old straw heap, (4) 2/8, 3 on Anthyllis vulneraria (E.C.P.-C.), (4) 31/7-2/8, under Anthyllis vulneraria (M.G.M.).

Anoplus plantaris (Naez.)

(1f) 6/8, 2 beating Betula, (8) 1/8, beating Betula (M.G.M.),

Dorytomus taeniatus (F.)

(4) 2/8, beating Salix (P.J.C.)

Notaris acridulus (L.)

(17) 29/7, general sweeping (M.G.M.),

Coeliodes nigratarsis Hart.

(8) 1/8, beating Betula (M.G.M.).

Micrelus ericae (Gyll.)

(10b) 5/8, 3 sweeping Calluna at 1000ft., (1) 28/7, general sweeping (M.G.M.), (12) 29/7, sweeping Erica tetralix (M.G.M.), (5) 31/7, sweeping E. tetralix/Calluna (M.G.M.).

Cidnorhinus quadrimaculatus (L.)

(7b) 30/7, tapping Urtica dioica (M.G.M.), (19) 3/8, sweeping U. dioica (M.G.M.).

Ceutorhynchus contractus (Marsh.)

(1g) 6/8, 16 sweeping, (3) 9/8, 2 sweeping, (3) 30/7, general sweeping (M.G.M.), (4) 31/7, sweeping Sisymbrium (M.G.M.), (3) 9/8, 1 in wet mouldy hay.

C. erysimi (F.)

(1g) 6/8, 4 sweeping.

C. floralis (Pk.)

(3) 2/8, general sweeping (M.G.M.).

C. litura (F.)

(6) 2/8, sweeping Cirsium sp. (M.G.M.).

C. pollinarius (Forst.)

(6) 2/8, sweeping (M.G.M.), (7b) 30/7, tapping Urtica dioica (M.G.M.).

Rhinoncus castor (F.)

(12) 29/7, at roots of Rumex acetosella (M.G.M.).

Anthonomus brunnipennis (Curt.)

(8) 1/8 and (4) 2/8, sweeping Potentilla erecta (M.G.M.).

Rhynchaenus fagi (L.)

(7b) 30/7, 1 beating Fagus (R.C.W. & M.G.M.), (16) 3/8, 1 sweeping.

Rhamphus pulicarius (Hbst.)

(1a) 28/7, 6 sweeping Salix repens, (14) 3/8, 1 on Umbel flowers.
(17) 29/7, beating Betula (M.G.M.), (5) 31/7, sweeping Myrica gale (M.G.M.), (8) 1/8, beating Betula (M.G.M.), (4) 2/8, sweeping Salix repens (M.G.M.).

