Methods

From June – September 1997 a Malaise trap, a ground Flight Interception Trap (Fig.2) and a Canopy Interception Trap (Fig. 3) were used to collect insects in the Hendre Wen area of St. Fagans. These traps were primarily used to assess the biodiversity of saproxylic beetles at the site, and only the saproxylic species were identified to species.

From 21st May to 8th October 2008 two Malaise traps (Fig. 1) and one ground emergence traps were used to collect insects at St. Fagans. Beetles were sorted to species, but not all identified to species.

Results

The 1997 survey showed that St. Fagans supports an important fauna of saproxylic beetles (i.e. beetles associated with dead or dying wood, wood associated fungi and other organisms associated with dead wood) (see Alexander, K.N.A. 2002). 71 species of saproxylic beetles have been found at the site. 17 species are nationally rare or notable species, and 14 of the species are indicators of ancient woodland. Most of the rarer species are likely to be associated with the larger open grown oak trees rather than the more recent plantation woodland. On present knowledge St. Fagans is the fourth best site in Wales for saproxylic beetles.

Most of the saproxylic species found in 1997 were not re-found in 2008, but eight new species of saproxylic species were found. It is likely that most of the saproxylic species found in 1997 are still present on the site and the difference is largely due to the type of traps used. Most of the saproxylic species collected in 1997 were collected in Flight Interception Traps and Canopy Interception Traps and would not be collected by the Malaise Traps used in 2008.

The 2008 survey produced 128 species of beetles. This is not a large total since only a limited number of trapping and collecting methods were used. It is likely that intensive collecting using a wider range of collecting techniques and hand collecting would at least double the number of species found.

Three species found at St. Fagans constitute the only known records of the species for Wales. At least nine other species are only known from a few other Welsh sites (see Table 1).

Recommendations

The saproxylic beetle fauna is dependent on a continuity of dead wood, in the form of dead wood on the ground and decaying wood in the trees. Larger pieces of fallen dead wood such as large boughs or fallen trees should be left in situ where possible, or moved into partial shade if it cannot be left where it falls. Smaller branches can be collected into wood piles which should be in partial shade to prevent rapid drying out.

Many saproxylic beetles visit flowering plants such as hawthorn and other woody Rosaceae, hogweed and other Apiaceae to feed and find mates. These plants are also visited by a wide range of other insects such as hoverflies, bees and wasps .Good stands of these plants should be maintained at the site.

Table 1. Coleoptera Recorded at St. Fagans in 1997 & 2008.
(Species in bold are saproxylic species).

Species	Status	Comments on Significant Species
Abdera biflexuosa	Notable B	Only three of four records from Wales. The first record for Glamorgan
Abraeus perpusillus	Local	
Acalles ptinoides	Notable B	
Aderus oculatus	Notable B	
Agathidium nigripenne	Local	
Anaspis frontalis	Common	
Anaspis garneysi	Unknown	
Anaspis lurida	Local	
Anaspis maculata	Common	
Anaspis pulicaria	Common	
Anaspis regimbarti	Common	
Anaspis rufilabris	Common	
Anisotoma humeralis	Local	
Anisotoma orbicularis	Local	
Anobium punctatum	Common	
Anthonomus pedicularis	Common	
Aspidiphorus orbiculatus	Local	
Atheta crassicornis	Common	
Atomaria atricapilla	Common	
Atomaria nigrirostris	Common	
Atomaria rubida	Local	
Barynotus moerens	Local	
Bolitochara lucida	Local	
Cantharis cryptica	Common	
Cartodere constricta	Local	Only a few welsh records from E. Wales. This is the first record from Glamorgan
Cerylon ferugineum	Local	
Chrysolina oricalcia	Notable B	This is the first record of this species from South Wales. There are a few other records from North Wales. Larvae feed on a variety of Apiaceae, especially cow parsley.
Cis boleti	Common	
Cis fagi	Local	
Cis nitidus	Local	
Clambus punctulum	Unknown	
Clambus simsoni	Unknown	
Colenis immunda	Local	
Conopalpus testacea	Notable B	
Crepidodera aurata	Common	
Crepidodera aurea	Common	
Cryptophagus dentatus	Unknown	
Cryptophagus intermedius	RDBK	This is the only known record from Wales.
Cryptophagus pubescens	Common	
Ctesias serra	Notable B	
Dorcatoma chrysomelina	Local	
Dropeophylla vilis	Common	

Dryocoetinus villosus	Local	
Enicmus brevicornis	Notable	
Enicmus transversus	Common	
Epiphanis cornutus	Unknown	This is only the second record from Wales.
Epuraea angustula	Notable B	This is only the second record from Wales.
Ernobius pini (Sturm)	Unknown	This is the first record from Wales.
Euplectus bonvouloiri	Notable	This is only the second record from Wales
Euplectus infirmus	Local	
Euplectus karsteni	Local	
Euplectus kirbyi	Notable	This is only the second record from Wales
Gabrius splendidulus	Common	
Grammoptera ruficornis	Common	
Graptus triguttatus	Local	
Halyzia sedecimguttata	Local	
Haploglossa gentilis	Local	
Harmonia quadripunctata	Local	
Henoticus serratus	Local	
Kissophagus hederae	Notable B	
Latridius anthracinus	Local	
Leiodes calcarata	Local	
Leiopus nebulosus	Local	
Leptusa fumida	Common	
Leptusa pulchella	Local	
Leptusa ruficollis	Unknown	
Liophloeus tessulatus	Common	
Lordithon exoletus	Local	
Lordithon trinotatus	Common	
Malthodes marginatus	Common	
Mecinus pyraster	Common	
Melanotus villosus	Common	
Microrhagus pygmaeus	RDB3	This is only the third record of this species from Wales.
Mordellistena neuwaldeggiana	RDBK	This is the only known site for this species in Wales.
Mordellochroa abdominalis	Local	
Mycetophagus quadripustulatus	Local	
Nicrophorus vespilloides	Local	
Nossidium pilosellum	Notable	There are only three other records of this species from Wales.
Ochina ptinoides	Local	
Orchesia minor	Notable B	
Orchesia undulata	Local	
Orchestes quercus	Common	
Orsodacne cerasi	Local	
Paromalus flavicornis	Local	
Pelenomus quadrituberculatus	Common	
Phloeonomus punctipenne	Local	
Plegaderus dissectus	Notable B	
Pocadius ferrugineus	Common	
Ptilinus pectinicornis	Common	
Pyrochroa coccinea	Notable B	
Rhamphus oxycanthae	Local	
Rhinoncus pericarpius	Common	
Rhinosimus planirostris	Common	
Rhinosimus ruficollis	Common	
Rhizophagus cribratus	Local	

Rhizophagus dispar	Common	
Rhizophagus nitidulus	Notable B	
Rhizophagus perforatus	Local	
Scaphisoma agaricinum	Local	
Sciaphilus asperatus	Common	
Scolytus intricatus	Local	
Serica brunnea	Local	
Siagonum quadricorne	Local	
Sphindus dubius	Notable B	
Strophosoma melanogrammum	Common	
Thamiaraea cinnamomea	Local	
Throscus carinifrons	Local	
Throscus dermestoides	Local	
Trypodendron domesticus	Local	

References

Alexander, K.N.A. 2002. The invertebrates of living and decaying timber in Britain and Ireland. A provisional annotated checklist. English Nature Research Report No. 467. English Nature, Peterborough.

Fig 1. Malaise Trap

Fig. 2. Flight Interception Trap

Fig. 3. Canopy Interception Trap