

Ecological Survey of the Allotments of Southampton

For

Southampton City Council

January 2005

Southampton Wildlife Link

(Part of the Southampton Natural History Society)

Edited and produced electronically by Philip Budd

February 2014



Contents

Background to survey.....	3
Historical Background to the Allotments.....	4
Introduction.....	4
Method of Survey.....	5
Results and Discussion.....	6
Consideration of each allotment on a site-by-site basis.....	10
Conclusions.....	13
Recommendations.....	14

Background to survey

The Southampton wildlife Link was first formed in 1988 and the original constitution was updated in the Terms of Reference dated 25th September 2002.

The purposes of the Southampton Wildlife Link (hitherto referred as 'The Link') are four-fold and as follows:

- To advise Southampton City Council and land owners on environmental issues, conservation and wildlife in the city and its immediate surroundings
- To improve and protect the physical environment for the benefit of wildlife and people in Southampton and its immediate surroundings
- To promote public awareness and concern for wildlife, the natural environment and the need for conservation
- To consult with and to seek to influence other appropriate bodies working within Southampton and its immediate surroundings

On 15th July 2002 the Link ceased to exist as an independent body and became a sub-committee of the Southampton Natural History Society (hitherto referred to as 'the Society'). Currently the Link meets approximately every two months at Sholing Valley Study Centre and representatives of a number of wildlife and conservation bodies are invited to attend, these organizations include:

Sholing Valley Study Centre Association
Sholing Environment Group
Hawthorns Wildlife Association
Southampton Commons and Parks Protection Society
Percy Road Residents Association

All of the above listed bodies are also Corporate Members of the Society. The current City Ecologist is invited to represent the Southampton City Council on this committee.

Prior to July 2002 the Link had regularly produced public materials including tri-fold leaflets on specific wildlife-related subjects and also reports on specific sites of wildlife interest around the city. Following the acquisition by the Society any outstanding projects were completed and some new projects were initiated. The purposes of the new projects were the promotion of the aims of the Link, as stated above.

The members of the Link considered that it would be appropriate to attempt to survey particular ecologically under recorded habitat types within the city as it was aware of the inadequate information available regarding the wildlife of some of these sites. In the case of the allotment gardens in the city there is no evidence that any previous ecological survey work has been undertaken. There have been surveys of pollution in all of the allotment sites by the Allotment Team. It is a legal requirement for the City Council to monitor pollution including sewage, heavy metal and organic chemicals at all of the allotment sites. However since there has been no corresponding ecological survey work there is a lack of information in this regard and the Link has decided to rectify this situation.

Historical Background to the Allotments

All of the Southampton allotments date back to at least the 1950's. The City (previously Town) Council acquired most of the allotments through the Allotment Act. Aldermoor Leisure Gardens, Paignton Road, Borrowdale Road and Studland Road Allotments are the youngest sites. Most of the remaining allotments were acquired in the 1930's and certain sites have been in cultivation for much longer. For example Oakley Road Allotment and Sandhurst Road Allotment were indicated as cultivated land in 1800. The latter site might even have been in cultivation since Saxon times.

Introduction

A survey of the 23 extant allotment gardens within the Southampton City boundary was undertaken between May 2003 and January 2005 by various representatives of the Link and coordinated by the current Link Chairman Philip Budd. Access to all 23 allotments in Southampton was gained with the authorization and cooperation of the Grounds and Cleansing Team of Southampton City Council – Local Services Division.

The survey involved gathering data on various features of the sites such as geographical area (i.e. acreage), geographical location and geology, the extent of unused plots and of species present. Information on a wide range of species was gathered including vascular flora, Bryophytes, fungi, invertebrates and vertebrate fauna.

The 23 allotment gardens in Southampton are the following:

Aldermoor Leisure Gardens	Radcliffe Road Allotment
Athelstan Road Allotment	Rownhams Road Allotment
Bangor Road Allotment	Sandhurst Road Allotment
Bitterne Allotment	Shirley Ponds Allotment
Borrowdale Road Allotment	Southwells Farm Allotment
Broadlands Road Allotment	Studland Road Allotment
Coxford Allotment	Swaythling Allotment
Hollybrook Allotment	Sydney House Allotment
Langhorn Road Allotment	Vinery Gardens Allotment
Muddy Bottom Allotment	Weston Allotment
Oakley Road Allotment	Witts Hill Allotment
Paignton Road Allotment	

All of these allotments are still (as of January 2005) in use except for the Radcliffe Road Allotment. This site was closed in 2001 after high levels of lead were measured in soil samples taken from here. Nevertheless this allotment was surveyed using the same method as elsewhere. In fact there are two allotments at Radcliffe Road. The closed site is situated on the south side of the road east of its junction with Union Road whilst the second (new) allotment is located on the north side of Radcliffe Road immediately west of the Hindu Temple. Unfortunately none of the keys provided by the Grounds and Cleansing Team allowed access to this site and in addition this site is not yet listed in the Allotments Charter published by Southampton City Council.

Method of Survey

Geological information was obtained from the British Geological Survey – England and Wales Sheet 315 - Southampton. Geographical location was determined by measurement of the Ordnance Survey Grid Reference from the OS Explorer Series – Sheet OL22 – New Forest (which includes all of Southampton). The area (acreage) of each allotment was obtained from the Grounds and Cleansing Team of the Southampton City Council – Local Services Division. The percentage of vacant allotment space was estimated visually.

The fungi, slime moulds, lichens and Bryophytes (mosses and liverworts) were surveyed using modest equipment including an x10 magnifying hand lens, a low-power binocular microscope and the appropriate identification guides. These taxonomic groups were not surveyed in all of the allotments.

Vascular Flora was systematically surveyed in all 23 allotments and lists generated for each site. An x10 magnifying hand lens and the appropriate identification guides, where necessary, were used in the surveys. The field data was recorded using the Plant Recording Form (Hampshire Biodiversity Action Plan) produced by the Hampshire wildlife Trust. An attempt was also made to determine the NVC (National Vegetation Classification) system as defined in the British Plant Community volumes (Rodwell et al.).

Data on both the invertebrate and vertebrate fauna of the allotment sites was obtained by simple daytime visual observation and by consultation with various allotment holders on site. The only exception this was that the study of clearwing moths (Order Lepidoptera – family Sesiidae) by means of the use of chemical attractants in pheromone traps. Although there were fauna surveys undertaken at all of the allotment sites this was generally less detailed than for the vascular flora.

Results and Discussion

Geological and Geographical Factors

The interpretation of geological data reveals that most of the allotments have a natural soil of either sand, clay, gravel or any combination of these. This is consistent with the overall Tertiary geology of the Southampton area. Most of the allotments on the western side of the city plus Weston Allotment (in the south-east) lie on gravels, mostly River Terrace Gravels. The sandy sites are mostly along the Lordsdale and Rolles Brook valleys or in the general area of Swaythling. The large allotments in the east e.g. Bitterne, Muddy Bottom, Athelstan Road and Witts Hill overlie clay soil, mostly London Clay. Langhorn Road Allotment and some of the allotments in the north –west of the city also over lie clays. The soil natural pH of the soil at most allotments sites in Southampton would be more or less neutral to somewhat acidic.

The total area of allotment in Southampton comes to 34.22 hectares (86 acres) and the average allotment size is 1.49 hectares (3.7 acres). The smallest allotment is Bangor Road Allotment at 0.11 hectares (0.28 acres) i.e. about the same as a large suburban garden. Radcliffe Road and Sandhurst Road Allotments are only slightly larger. By far the largest allotment is Weston Allotment at 7.0 hectares (17.5 acres) followed by Bitterne and Muddy Bottom Allotments at 3.8 hectares (9.5 acres) and 3.5 hectares (8.8 acres) respectively.

As of the summer of 2003, and excluding the disused Radcliffe Road Allotment, the average area not used for cultivation within the allotments was 29%. This included both vacant plots and areas that appear to have gone out horticultural use. The actual average percentage of unused plots was estimated at between 10% and 20%. Only three of the smaller allotments appear to be in 100% usage, these were Bangor Road, Rownhams Road and Langhorn Road Allotments. By contrast only 20% of Shirley Ponds Allotment appeared to be in cultivation. Other allotments that appeared to be under used in the summer of 2003 (with estimated percentages of land not under cultivation) included Muddy Bottom Allotment (60%); Weston Allotment (50%) and Broadlands Road Allotment, Hollybrook Allotment and Southwells Farm Allotment (all 40%).

Biological Factors – Flora

42 Mycota taxa (species) were recorded during the course of the allotment survey and this broke down to one Myxomycete (slime-mould), six lichens and 35 fungi. None of these species are of known conservation significance or particularly rare. 42 Bryophyte taxa (species) were also recorded and these broke down to 37 mosses and five liverworts. Again none of these species were rare or of particular conservation significance. One species of Pteridophyte (ferns etc.) species was recorded; this was Water Fern *Azolla filiculoides*. This is an alien species from South America and associated with ponds or other slow-moving freshwater.

A total of 238 taxa (species) of flowering plants were recorded. This list does not include species thought to be deliberately planted or cultivated but does include archaeophytes (ancient introductions), neophytes (recent introductions) and true native species. Individual site lists were compiled enabling individual allotments to be compared by their flora diversity. On average 63 species were found per allotment. The largest list obtained was for Muddy Bottom Allotment (86 species) followed by Weston Allotment (83 species) and Oakley Road Allotment (82 species). The smallest species lists were for Sandhurst Road Allotment and Langhorn Road Allotment (both 46 species) and Swaythling Allotment (47 species). It must be noted that, generally speaking, the larger lists were obtained for the more extensive allotments and vice-versa.

Of the 238 species of flowering plants found only one of the species is listed in the latest Hampshire Biodiversity Plan (Hants BAP) and this is Broad-leaved Spurge *Euphorbia platyphyllos*. This species was only found at Athelstan Road Allotment in Bitterne but could potentially occur in other allotments in Southampton. In addition five species listed as Hampshire Notable's were discovered during the allotment survey but one of these i.e. *Bromus lepidus* (apparently found at Hollybrook Allotment) could be an identification error. There is also a problem with 'Wild Pansy' *Viola tricolor*, found at six allotments as this species was not reliably distinguished from the hybrid between Wild Pansy and the Field Pansy *Viola x contempta*. Of the other three species there is no question over identification. These three Hampshire Notable Species were Meadow Brome *Bromus commutatus*, found at Shirley Ponds Allotment; Corn Marigold *Chrysanthemum segetum*, found at Athelstan Road Allotment and Toothed Medick *Medicago polymorpha*, found at Oakley Road Allotment.

Most of the species recorded were common perennials or arable plants and two species were found at all 23 sites i.e. Scarlet Pimpernel *Anagallis arvensis* and Groundsel *Senecio vulgaris*. Five further species, each missed at one site, were likely to have normally been present at all 23 sites. These species were Shepherd's Purse *Capsella bursa-pastoris*; Petty Spurge *Euphorbia peplus*; Fat-hen *Chenopodium album*; Lesser Swine-cress *Coronopus didymus* and Nipplewort *Lapsana communis*. All of these latter species are strongly associated with disturbed ground and are mainly annual in growth. Of the perennials the two commonest species, both recorded at 19 sites, were Broad-leaved Dock *Rumex obtusifolius* and Stinging Nettle *Urtica dioica*.

There were a few other interesting species of flowering plant recorded during the course of the allotment survey. These were Tall Ramping-fumitory *Fumaria bastardi*; Long-stalked Crane's-bill *Geranium columbinum* and Wild Snapdragon (or Weasel-snout) *Misopates orontium*. The fumitories are a rather difficult group of species to determine but at five allotments i.e. Aldermoor Leisure Gardens, Hollybrook Allotment, Oakley Road Allotment, Weston Allotment and Swaythling Allotment this species was reliably distinguished from the Common Ramping-fumitory *Fumaria muralis*. Long-stalked Crane's-bill *Geranium columbinum* is normally a calcicole (chalk-loving) but was found at Weston Allotment, this is probably the first Southampton record. Wild Snapdragon *Misopates orontium* was found in 18 of the allotments. There are many other records of this plant on brown-field sites and in private gardens in Southampton but it is localised and rather scarce in the UK as a whole. This pretty annual favours light, somewhat acidic, soils and the sub-Mediterranean climate of the Southampton area (mild winters and dry summers).

Biological Factors – Vegetation Types

An attempt was made to analyse the NVC (National Vegetation Classification) at each of the allotment sites in Southampton. It was found that the two main vegetation types present were Mesotrophic Grassland (MG) and Open Vegetation (OV). The three main MG communities identified were MG1 (*Arrhenatherum* (False-oat) grassland); MG6/7 (communities dominated by *Lolium sp.* (Rye-grass) but also containing variable quantities of *Poa sp.* (meadow-grasses) and *Festuca sp.* (fescues)) and MG10 (damp grassland communities with *Holcus sp.* (soft-grasses) and *Juncus sp.* (rushes)).

MG1 communities were particularly prevalent at Borrowdale Road, Hollybrook, Southwells Farm and Studland Road Allotments in the west and Weston, Bitterne and Swaythling Allotments in the east. These communities indicate high soil fertility and give an indication that soil has been introduced or/and that the sites have been cultivated for a long period, since the natural soils of Southampton are rather infertile. Significant MG6 and/or MG 7 communities were only found at Shirley Ponds Allotment in the west and Muddy Bottom Allotment and Weston Allotment in the east. These communities indicate that there has been much less alteration from the natural soil condition. MG10 communities were quite common in the allotments of Southampton. In the west they were dominant over large areas of Shirley Ponds Allotment and also present at Coxford, Sandhurst Road and Southwells Farm Allotments. In the east significant quantities of MG10 were found at Athelstan Road, Bitterne, Muddy Bottom, Sydney House and Witt's Hill Allotments. MG10 is associated with damp conditions, typically in valley bottoms or where springs may arise in wet winter weather. They are generally more difficult to cultivate successfully and thus contain areas of higher nature conservation potential.

NVC Open Vegetation (OV) communities are present in large quantity in all of the allotments. Several OV communities were identified but their significance in the context of this survey is not great due to the fact that they are associated with unnatural, cultivated habitats that change considerably over time.

Biological Factors – Fauna

The data for fauna is very incomplete but it was possible to obtain some information from all 23 allotment sites. The main wild grazing animal is likely to be Roe Deer but no evidence of these was found. Wild Rabbits were only found to be present at one allotment i.e. Swaythling Allotment in the extreme north-east of the city. Hedgehogs were known to be present at Sydney House Allotment and are likely to be widespread. Foxes have been reported at Oakley Road Allotment recently. There were very few bird records of any significance but no doubt any untidy plots are likely to be a good food source for birds in the winter. Of reptiles Slow-worms were actually seen, or reported to be present, at six allotments but are very likely to be present at most of them. Common Lizards were actually seen at Athelstan Road Allotment and reported to be present (at least in the

past) at Bitterne, Coxford, Hollybrook, Paignton Road, Studland Road and Sydney House Allotments. A Grass Snake was reported as seen at Studland Road Allotment in 2002 and there were also reports of them in the past (no date) at Hollybrook Allotment. Adder had been reported in the past at Swaythling Allotment but again no date given. Common Frog and Smooth Newt populations were seen in the small ponds at Southwells Farm Allotment and both Common Frog and Common Toad were reported as seen at Studland Road Allotment in 2003.

There were no records collected of Molluscs or of other invertebrates, other than insects. Most of the insect recording effort was focused on the butterflies. 15 species of butterfly were seen during the course of the surveys but there were no species of either National or local (Hampshire) conservation significance. The most frequently recorded butterfly species was Meadow Brown (at 14 sites) followed by Small White and Small Tortoiseshell (both at 11 sites). Also frequently seen were Large Skipper (at 7 sites), Red Admiral (6 sites), Gatekeeper (5 sites) and Comma (also at 5 sites). The most significant species recorded were Marbled White, Common Blue and Small Copper. These species are more interesting because they are associated with the more undisturbed habitats that are of higher conservation interest. Marbled White are most likely to breed were MG6/7 communities are significant but the only record was from Athelstan Road Allotment, where it may have wandered from Peartree Green. However this butterfly may have been missed at other sites because it only flies for a short season in June and July. The Common Blue was only recorded at Shirley Pond Allotment, where it is probably breeding on the Greater Bird's-foot Trefoil *Lotus pendunculatus* in damp MG10 grassland. It was pleasing to see Small Copper at three sites i.e. Coxford Allotment, Hollybrook Allotment and Weston Allotment. At Weston the Small Copper is likely to be breeding on sorrel *Rumex sp.* in the MG6/7 grassland. The other two allotments are close to large areas of good habitat for Small Copper at Hollybrook Cemetery and Southampton Sports Centre. Another butterfly that might have been expected, but not seen on the survey, was Brown Argus.

Some of the allotments with significant areas of uncut grass no doubt contain large populations of grasshopper *Chorthippus sp.* and *Omocestis sp.* and Coneheads *Conocephalus sp.*, together with associated predatory spiders *Araneus sp.* and *Argiope*. A large colony of Long-winged Conehead *Conocephalus discolor* was found at Shirley Ponds Allotment and there is an inner city colony of Field Grasshopper *Chorthippus brunneus* at Radcliffe Road Allotment. Of moths Shirley Pond Allotment was particularly good habitat for burnet moth *Zygaena sp.* Also there was a study of clearwing moths, using pheromone lures, since cultivated land is often very good habitat for these species. There was some success with this method as Red-belted Clearwing Moth was found at Athelstan Road Allotment and Currant Clearwing Moth at Witts Hill Allotment.

Social Factors

Although not within the specific remit of this survey some facts about the allotment use and the users themselves may be of significance.

Generally speaking there were usually some plot holders present and working, even though most of the visits took place during 'office hours' on week days. The only three allotments where no other persons were seen during any visit were Bangor Road, Shirley Ponds and Rownhams Road Allotments. These allotments were all small sites and/or under used. No counts were made of numbers of people using the allotments at any point of time but it was very obvious that around 90% of the people seen appeared to be over 50 years of age and that at least 80% were male. There was no intention or requirement to approach plot-holders to speak to them but naturally there was some curiosity with regard to what I was doing. Of those people who were actually willing to speak at length, and provide useful information, most appeared to be at least 60 years old and all were male. Fortunately there were no unpleasant encounters or incidents during the course of this survey.

It would appear that it is currently relatively easy for prospective allotment holders to find allotment plots, at least compared to the situation in other major towns in east Dorset, Hampshire and West Sussex. Currently there appears to be no waiting lists for the use of allotment plots in Southampton.

There is also the issue of anti-social behavior but generally speaking most of the allotments in Southampton are relatively secure. At 21 sites there was no recent evidence of deliberate damage (vandalism), fires, tipping or other anti-social behavior. Only at Coxford Allotment and Weston Allotment did security and anti-social

behavior become significant issues. No problems were actually witnessed at Coxford Allotment but it was clear that security issues were important to all of the plot holders spoken to there and that there were likely to have been major issues there in the past. At Weston Allotment there was a horrible situation where a tidy and well used eastern part was separated from an unused western area by a 'buffer zone' of smashed up or burnt sheds. It was actually possible to access the entire Weston Allotment via gaps in the broken down fences and a path (presumably maintained by dog-walkers) had been created connecting both sides of the unused section. Furthermore a JCB that had been left on site for some reason had been badly damaged or vandalsied at some point!

Consideration of each allotment on a site-by-site basis

Aldermoor Leisure Gardens

This relatively new allotment is well used and has a relatively rich flora, including Tall Ramping-fumitory *Fumaria bastardii*. There are plenty of nectar sources available for butterflies and the site lies adjacent to the Aldermoor Copse section of the Lordsdale Greenway.

Athelstan Road Allotment

This is a large and very interesting site with a warm aspect on a west facing slope. The southern part appears to be a private nature reserve with a pond, marshy areas and even some proper woodland. Otherwise the site is well used as an allotment. It is an important site floristically as both the Hampshire Notable Corn Marigold *Chrysanthemum segetum* and the Hampshire BAP Broad-leaved Spurge *Euphorbia platyphyllos* occur here. There is also likely to be a rich fauna due to the nature reserve area and the proximity to both the railway line and Chessel Bay Local Nature Reserve.

Bangor Road Allotment

This is a small site in the built up Freemantle area of the city but the light soils encourage high flora diversity. This site is also an important oasis of greenery in a local context.

Bitterne Allotment

This is a large and important site on a warm west facing hill but 33% of it was unused in 2003. There appears to be no particularly interesting flora here but there is evidence of a good population of lizards and small mammals. There is a strong case for restoration of some heath land/acid grassland here.

Borrowdale Road Allotment

This site is relatively large and contains about 33% unused ground. No particularly significant flora was found and there is evidence of a high nitrogen content in the soil. There is some evidence of relatively rich insect fauna and the site is of some additional value as there is little good wildlife habitat in the surrounding areas.

Broadlands Road Allotment

This is a small and under used allotment with a low flora diversity but some potentially good grassland for butterflies. The site is adjacent to the increasingly overgrown Broadlands Valley Greenway.

Coxford Allotment

This is a small but under used allotment (33% of it lied vacant in 2003). Overlying a clay soil the flora isn't particularly remarkable but there is evidence of a rich fauna including Common Lizards. It lies adjacent to the Coxford Copse section of the Lordsdale Greenway but has experienced issues with anti-social behavior.

Hollybrook Allotment

One of the larger allotments but 40% of it was not under cultivation in 2003. There is a good flora here with Tall Ramping-fumitory *Fumaria bastardii* found to be present. The site is also rich in Bryophytes and 30 species of these were identified, no doubt the north-west facing aspect is a factor in this. It is possibly a good site fauna-wise too as Grass Snakes and Common Lizards have been recorded in the past and it lies close to several other large green areas.

Langhorn Road Allotment

This is a very small allotment with the plots all being used. As a result of the clay soil the flora is not particularly rich but a lot of Wild Pansy *Viola tricolor* or/and its hybrid *Viola x contempta* was present in 2003. There are no other greenways immediate to the site but Daisy Dip and the Monks Brook Greenway are relatively close and there may be some connectivity with those sites.

Muddy Bottom Allotment

This site is one of the largest allotments in Southampton but a belt of grazing land effectively splits the cultivated area of the allotment into two separate areas. The variety of habitats and the large area leads to a particularly rich flora – more species than were found at any other site. The cultivated areas were quite well kept and the less common arable species were scarce. The most uncommon plant found here was Corky-fruited Water-dropwort *Oenanthe pimpinelloides*, an associate of species rich damp grasslands. The site has considerable potential for insects and birds and also it is effectively part of the Sholing Common branch of Shoreburs Greenway.

Oakley Road Allotment

This is a relatively large and fairly well utilized allotment but an estimated 25% of it was not under cultivation in 2003. Despite its urban setting it was a rich habitat for wildlife and could be considered to be an extension of the Lordsdale Greenway. This is a good allotment for flora with a strong population of Tall ramping-fumitory

Fumaria bastardii and also Toothed Medick *Medicago polymorpha* present. The presence of a hunting Kestrel indicated that there is likely to be a good population of small mammals here too.

Paignton Road Allotment

This is a relatively large and well used allotment but with small areas unused (about 10%). The site is flat and the soils light but it is not a particularly interesting site for flora and fauna. The main value of this site, as regards wildlife, is the fact that it constitutes a significant patch of greenery in a well built up area.

Radcliffe Road Allotment

This is the only allotment in Southampton believed to overly made-up ground and the discovery of lead contamination in 2001 forced its closure. It is an unimportant site for fauna but the flora diversity was the highest for any allotment for its size. As for Langhorn Road Allotment there was a lot of Wild Pansy *Viola tricolor* or/and its hybrid *Viola x contempta* present here in 2003.

Rownhams Road Allotment

This is a very small and very well used allotment in a very urban setting. It is too isolated from the Lordsdale Greenway or any other open space to be really interesting. No flora or fauna of significance.

Sandhurst Road Allotment

This allotment, adjacent to the Rollesbrook Greenway, is probably the most ancient cultivated land in Southampton. As an allotment it is small and poorly maintained with 33% of the area not under usage in 2003. There were no particularly interesting discoveries here but the presence of House Martins in such an inner location would indicate that there are plenty of insects in the area.

Shirley Ponds Allotment

This allotment is virtually completely neglected with only about 20% of the area until cultivation in 2003. This site contains a large area of rather damp mesotrophic grassland adjacent to the Tanner's Brook. Meadowsweet *Filipendula ulmariae* and Great Bird's-foot Trefoil *Lotus pedunculus* featured strongly here and Meadow Brome Grass *Bromus commutatus* was present too. By contrast the arable flora was very poor. This is a very interesting site for insects and other invertebrates.

Southwells Farm Allotment

This site is long but narrow and lies on flat ground on a gravelly substrate. It is likely that prior to the construction of Tebourba Way this allotment may have been continuous with Oakley Road Allotment as one very large site. This site was found to be 40% unused for cultivation in 2003 but the soil seemed to be very rich in nitrogen and thus the flora diversity was poor. This allotment doesn't appear to be particularly significant habitat for fauna except for the additional interest provided by the ponds at the southern end. Here both Smooth Newt and Common Frog occur.

Studland Road Allotment

This is a large allotment on the western edge of the city and it is close to the Test valley. Some parts of the site are well used but 30% of it lied vacant in 2003. The flora diversity is low but wild pansies *Viola tricolor* and/or *V. x contempta* was present. There were reports of a rich vertebrate fauna including Common Toads, Common Lizards, Grass Snakes and Hedgehogs and no doubt there are interesting insects there too.

Swaythling Allotment

This is a rather small allotment on the north-east edge of the city and adjacent to the Itchen valley. It also lies adjacent to the large Stoneham Cemetery and close to the Itchen Valley Conservation Area. Despite the light, sandy soil some 30% of the area was not under usage in 2003. The flora list was surprisingly small but Tall Ramping-fumitory *Fumaria bastardii* was recorded. There is a distinctly rural fauna here with Wild Rabbits present and Adders recorded in the past.

Sydney House Allotment

This site, in the Peartree area of Bitterne, is relatively well used (only about 20% of the area not under usage) and a lot of trees connect it to nearby Freemantle Common. It is not an important site for flora but provides an important wildlife corridor. Cloudy weather on the day of the site visit prevented a study of the insect life but this site is known to be a haunt for Common Frogs, Common Lizards and Hedgehogs.

Vinery Gardens Allotment

This is a small and well used allotment on a sandy north-west facing slope adjacent to the Hollybrook valley. This site has a relatively rich flora with several moderately interesting species being found. It is likely to be a good site for insects but there wasn't much time to study these on a short visit.

Weston Allotment

This allotment has the largest area under cultivation of any allotment in Southampton and adjacent to the cultivated land there is a significant area of mesotrophic grassland. This allotment has a gravelly soil and is one of the richest allotments for flora. It is one of several sites where Tall Ramping-fumitory *Fumaria bastardii* has been found and also probably the only site in Southampton for Long-stalked Crane's-bill *Geranium*

columbinum. The invertebrate fauna has not been studied but it is likely to be an interesting site. Unfortunately this allotment, lying adjacent to the Weston Estate, has suffered terribly at the hands of hooligans.

Witts Hill Allotment

This rather large allotment, in the Midanbury area of Southampton, lies on a south west facing slope and has a clay substrate. About 25% of the area was not under cultivation in 2003 but most of this remaining was grassland. This site was found to be one of the richest for flora but none of the most significant species were present. Some interesting fungi species were also found. The site appears to be quite significant for invertebrates but the interest for larger animals may be limited by the fact that the site is isolated from other green areas.

Conclusions

An ecological survey of all 23 accessible allotment gardens in Southampton concluded that these sites contain a diverse range of wildlife habitat. There is little woodland or wetland but all of the allotments contain open vegetation, mainly in the form of cultivated land, and many also include areas of mesotrophic grassland. Several of the allotments in Southampton run through the recognized 'greenways' and many of these have small streams running through them, adding to the diversity of the sites. Only one of the allotments, at Radcliffe Road (Northam), is no longer under cultivation due to soil contamination. However many of the allotments contain currently unoccupied plots and/or include large that have not been cultivated at all or at least not for a long period. On average about 30% of allotment area in Southampton were not under cultivation in the summer of 2003.

The allotments, except for Radcliffe Road Allotment, tend to fall into one of four categories:

- **Relatively small but well utilized sites in very urban surroundings.** These have a low wildlife interest but do provide green space in an otherwise built up environment. Examples include: Bangor Road, Borrowdale Road, Langhorn Road, Paignton Road, Rownhams Road, Sydney House and Witt's Hill Allotment. The latter site is rather larger and more suburban than is typical for this group.
- **Poorly managed and/or under used sites that are effectively continuous with other green areas.** These sites have a high wildlife potential due to their locations. However there are questions over the future viability of these sites as allotments and also their potential as wildlife conservation areas. Good examples in this category include Broadlands Road (next to Broadlands Greenway), Coxford (by Lordsdale Greenway), Hollybrook, Sandhurst Road (next to Rollesbrook Greenway), Shirley Ponds (by Lordsdale Greenway) and Southwells Farm Allotments.
- **Well utilized allotments within larger green areas.** These sites are best retained as allotments but there may some purpose in monitoring their wildlife interest. Examples include Alder Moor Leisure Gardens (adjacent to Lordsdale Greenway), Bitterne Allotment, Oakley Road Allotment and Vinery Gardens Allotment (also adjacent to Lordsdale Greenway).
- **Relatively large and underutilized allotments in the suburbs of the city.** These allotments could be reduced in size or partly retained as nature reserves. The continued future monitoring of wildlife at these sites is important. These sites include Athelstan Road Allotment (next to Chessel Bay LNR), Muddy Bottom Allotment (part of Shoreburs Greenway), Studland Road Allotment, Swaythling Allotment and Weston Allotment.

The allotments in Southampton provide a valuable wildlife resource due to the following factors:

- Quite simply allotment space is mostly land not covered in concrete, tarmac, bricks or mortar. Southampton is a very green city but some of allotments are located in the most built up areas and total acreage is over 34 hectares so they are still an important contribution to open space.
- Allotments are a very 'clean' and 'green' way of producing crops and the cultivated land tends to be much less affected by chemical input than are cultivated lands in most of the countryside.
- Many of the allotments in Southampton act as additional wildlife corridors increasing the connectivity of the green 'lungs' of the city and reducing fragmentation of wildlife habitat. Although not mentioned in this survey many allotments contain lines of mature trees around their edges, thus increasing their value as wildlife corridors.
- The value of allotments as wildlife sanctuaries, especially as regards vertebrate fauna, is higher than for many other open green areas in the city because of the relatively low level of human disturbance. The fact that these sites are not open to the general public means that there is no dog fouling, usually no disturbance to wildlife by dogs (although cats can often still access allotments) and there is less chance of damage or pollution through fly tipping, arson or accidental fires.

Recommendations

The Southampton Wildlife Link recommends the following actions to be considered by the Southampton City Council:

- Attempts should be made to ensure that the allotment plots are utilized as much as possible.
- Attempts should be made to encourage younger people i.e. anyone less than 50 years of age to use allotments more.
- Should any significant allotment space continue to be unused over a long period consideration should be given to allowing use either as public open space or as secure nature sanctuaries.
- The security situation at Weston Allotment should be addressed quickly
- There should be more consideration given to promoting allotments to the local community in areas close to allotments that are under used and/or subject to anti-social behavior.
- Consideration should be given to further monitoring of the flora and fauna, especially the fauna, of those allotment sites where the more significant wildlife habitats occur.

