Local Nature Recovery Strategy

for Hampshire

2025

Part 3: Species Recovery

Hampshire County Council

hants.gov.uk

Contents

Species recovery

Species abundance and diversity serve as crucial indicators of the health of the natural environment. The government has set legally binding targets to:

- Halt the decline in species abundance by the end of 2030.
- Increase species abundance by the end of 2042 so that it is greater than in 2022 and at least 10% greater than in 2030.
- Reduce the risk of species' extinction by 2042, when compared to the risk of species' extinction in 2022.

Expanding the habitat network is critical, therefore, to increase species abundance, reduce risk of species extinctions and help deliver national targets.

Within the LNRS for Hampshire, the first step in the process of identifying those species to target for species recovery was the creation of an LNRS species longlist. This longlist includes species identified using criteria set by Natural England[1] and that meet national rarity categories, together with additional Natural Environment and Rural Communities (NERC) Act[2] species, and birds of conservation concern. The longlist included 1,618 species[3] for Hampshire. The source of this data came from the Hampshire Biodiversity Information Centre (HBIC) which holds over 11 million species records covering nearly 20,000 species, much of it collected by the Hampshire species recording groups, volunteer experts whose contributions to recording the wildlife of Hampshire are invaluable.

The second step consisted of creating a more succinct and targeted LNRS species priority list from the longlist. Selection of species for the priority list was informed by a species recovery prioritisation workshop held in March 2024. It was attended by the key species recording groups and local experts, and a number of statutory and nature conservation organisations[4]. The process included removing species:

- that are considered extinct in Hampshire with no chance of returning;
- where there were very few records and not seen for least two decades;
- where populations are thought to be stable or increasing;
- that would require action outside England; or
- where further evidence would be needed.

Some species have been retained where there is a species recovery programme and/or chance of reintroduction, or expansion of range through the effects of climate change.

1 Species Recovery within Local Nature Recovery Strategies - Advice for Responsible Authorities (August 2023) - **https://ericnortheast.org.uk/wp-content/uploads/2024/03/Species-Recovery-within-Local-Nature-Recovery-Strategies-v.1-August-2023.pdf**
2 Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 - **https://www.legislation.gov.uk/ukpga/2006/16/section/41**
3 Species Long List - **https://www.hants.gov.uk/landplanningandenvironment/nature-recovery-hampshire/hampshire-strategy**
4 Species Recovery Prioritisation Workshop Report - **https://www.hants.gov.uk/landplanningandenvironment/nature-recovery-hampshire/get-involved**

Habitat recovery classes

To support the compilation of the shortlist, each species was assigned a habitat recovery class, ranging from A – E, based on their nature recovery requirements. Some species were assigned more than one class, where appropriate. The list of habitat recovery classes was presented to the species recovery prioritisation workshop and is set out in Table 3.1, below.

Table 3.1: Habitat Recovery Classes

Category	Description	Benefit from LNRS?	Suitable LNRS species priorities?
A: Needs more/bigger/better connected habitat	• Species likely to markedly benefit from general creation, expansion, and improved connectivity of good quality habitats in the strategy area. • Species with high recovery potential that do not require specific or targeted recovery measures.	Yes	Probably not. Species are likely to benefit from LNRS measures generally and do not need to be singled out for specific measures.
B: Needs targeted habitat management	• Species with specific requirements for habitat quality, structure, conditions, or processes above and beyond category A. • Species may require specific configurations or complexes of connected or nearby habitat(s), either at site level or across large areas/multiple sites. This may include habitat connectivity measures for species needing support to track climate change. • Causes of decline can be addressed with new or improved management practices.	Yes	Yes

C: Needs improvements in environmental quality	• Species primarily limited by one or more pressures beyond site level that can be mitigated at LNRS scale or wider scales through collaboration with neighbouring responsible authorities. Examples include better catchment water quality, improved spatial planning of air pollution sources, or mitigation of recreational disturbance.	Yes	Yes
D: Needs bespoke conservation action(s)	• Species requiring additional, tailored measures which can be spatially indicated on the local habitat map. • Species may need multiple coordinated actions to bring about recovery, including combinations of local actions and national actions where LNRS could address the former. Examples of bespoke, spatially targetable local actions include conservation translocations (such as assisted colonisation for climate change adaptation), control of invasive species, and localised surveys. • Species requiring bespoke measures which cannot be mapped should be assigned to category E.	Yes	Yes
E: Needs better evidence base	• Species for which there is insufficient evidence or understanding regarding drivers of decline, recovery actions required, and range/population levels. • Species for which the current priority is other than on-the-ground action, for example research or off-site conservation.	Unknown	No. On-the-ground action is not a priority.
F: Needs action outside England	• Species with low (or very low) recovery potential due to factors constraining recovery beyond England's borders or evidence shows that action in England is highly unlikely to improve species' prospects. This category is likely to apply only to migratory species (e.g., Afro-Palearctic migratory birds affected by hunting).	No	No
G: Vagrants / occasional visitors	• Species currently outside their normal breeding or wintering range or normal migration route, without an extant population in the strategy area, and which are not suitable for conservation translocation.	No	No

Only a few of these species fell into Class A and so do not need targeted measures. They will benefit from the general creation, expansion, and improved connectivity of good quality habitats that the LNRS aims to encourage. Therefore, in identifying priority species, we have focused on those that need actions that go beyond wider habitat restoration.

Species priority list

The LNRS species priorities list contains the individual species and groups of species (assemblages) that the LNRS will focus on supporting. Species assemblages which share habitat requirements are likely to benefit from the same recovery measures. They can therefore be addressed collectively in the LNRS rather than individually. For example, the species within the assemblage ancient woodland birds are largely dependent on the active management and enhancement of ancient woodland to improve structural diversity.

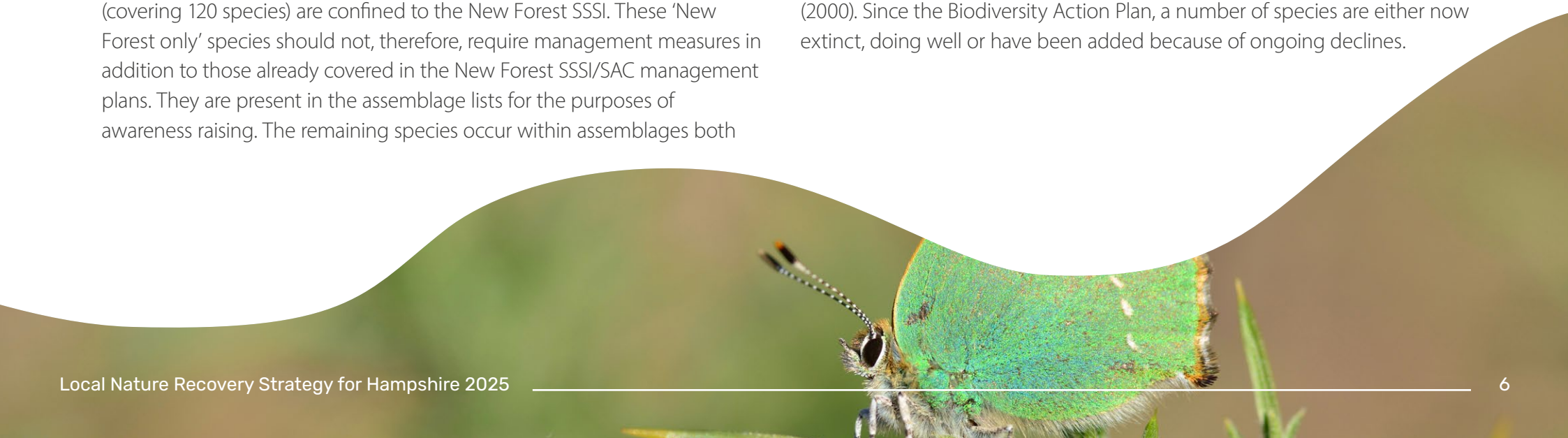
419 species are included in the species priority list, of which:

- 69 are priority species, that do not fit easily into assemblages, with most requiring more targeted and bespoke action, especially those in class D. Two species are in class C where other environmental improvements are required (water quality and air quality improvements). The majority are in a mix of recovery classes where measures are proposed based on current practices and guidance.
- 350 species are grouped into 37 assemblages, of which five assemblages (covering 120 species) are confined to the New Forest SSSI. These 'New Forest only' species should not, therefore, require management measures in addition to those already covered in the New Forest SSSI/SAC management plans. They are present in the assemblage lists for the purposes of awareness raising. The remaining species occur within assemblages both in and/or outside the New Forest SSSI where more generic management measures can be applied to their habitat, although for many, they still require more bespoke measures even within an assemblage, this usually applies to one aspect of their life cycle, e.g. for breeding or feeding and is covered in the tables as far as possible. Links within the tables, below, provide more detailed guidance.

Records for some of the species listed may be several decades old, simply due to lack of recorders. New surveys are always recommended to confirm presence before any targeted or bespoke measures are carried out.

The species priorities list represents those species for which species recovery could realistically be progressed within the timeframe of the LNRS period, resources allowing.

Coincidentally the final number of 419 species listed does not differ substantially from the 444 species listed in the previous Hampshire Biodiversity Action Plan (2000). Since the Biodiversity Action Plan, a number of species are either now extinct, doing well or have been added because of ongoing declines.



Species tables

The following tables (Tables 3.2, 3.3 and 3.4), below, present the LNRS for Hampshire species priorities list. Table 3.2 includes individual priority species for which specific actions are required. Table 3.3 covers species assemblages for birds. Table 3.4 covers species assemblages for all other groups. Additionally, Table 3.5 includes those species assemblages for the New Forest SSSI. These species do not form part of the species priority list as the New Forest SSSI has its own statutory measures.

Within the tables, the following groups (taxa) are represented:

- Amphibians and reptiles.
- Birds.
- Fish.
- Fungi.
- Clubmosses, conifers, flowering plants and stoneworts.
- Invertebrates
  - Annelida (leeches).
  - Araneae (spiders).
  - Cnidaria (sea anemones).
  - Coleoptera (beetles).
  - Crustacea (crayfish and shrimps).
  - Diptera (flies).
  - Ephemeroptera (mayflies).
  - Hemiptera (bugs).
  - Hymenoptera (bees, wasps and ants).
  - Lepidoptera (butterflies).
  - Lepidoptera (moths).
  - Molluscs.
  - Odonata (dragonflies and damselflies).
  - Orthoptera (grasshoppers and crickets).
- Lichens and fungi-related lichens.
- Lower plants (bryophytes and liverworts).
- Mammals.

Brief information on each species is provided in the following tables including information on distribution in Hampshire and links to fact sheets on management guidance or recovery projects such as 'Back from the Brink'.

Another source of guidance for many of the species listed is the recently published (August 2025) Threatened Species Recovery Actions (TSRA) project[5] which identifies which species are most in need of recovery in England today and the specific actions required to progress their recovery. Led by Natural England, TSRA is the result of a large and diverse partnership of governmental and non-governmental organisations, and comprises a spreadsheet containing the actions and associated data for each species listed.

5 **Threatened Species Recovery Actions 2025 baseline - JP065**

Table 3.2: Individual priority species requiring bespoke measures

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Amphibians

Epidalea calamita **Natterjack toad** **D**

Only one current site in Hampshire out of 80 UK sites. Four-year translocation programme to a former site near Woolmer from its main site. Requires open sandy heath and shallow ephemeral pools. **Returning the natterjack toad to Blackmoor | Amphibian and Reptile Conservation**

Bees, wasps and ants

Chrysis fulgida **Shimmering ruby-tail** **B/E**

This parasitic wasp is associated with scrubby heathland and open woodland where its host is found in the vicinity of aspen and creeping willow. Found in the New Forest and north-east Hampshire. Requires dead wood. More survey and monitoring needed. **Chrysis fulgida | BWARS**

Beetles

Bembidion quadripustulatum **Scarce four-dot pin-palp** **B**

Only found at Bishops Waltham North Pond and Hockley Meadows in Winchester. Management should aim at maintaining open conditions and encouraging early successional stages in wetland margins including bare mud adjacent to standing running water.

Donacia bicolora **Two-tone reed beetle** **C/E**

Found within stands of *Sparganium erectum* on the edge of the River Slea at Kingsley, the River Wey at Bentley and on the Basingstoke Canal in Aldershot. High water quality essential. Water quality improvements and marginal vegetation restoration are required. These are old records, so more survey required to determine presence.

Enochrus nigritus **N/A** **B/E**

Recorded in New Forest, Bartley Heath and Mortimer. Loss of wet heathland habitats have contributed to its decline. Maintenance and creation of undisturbed, shallow, exposed fen pools is key. These are old records, so more survey required to determine presence.

Erotides cosnardi **Cosnard's net-winged beetle** **D/E**

One of our rarest and most threatened invertebrates with only one record in Hampshire - on old growth beech at Noar Hill 2006. It requires the continuous presence of sufficient old Beech trees in the landscape and importantly

decaying Beech trees, trunks and stumps to endure habitat continuity. More survey and research are needed.

Cosnard's net-winged beetle - species information guide

Graphoderus zonatus **Spangled water beetle** **D**

Confined to lakes and man-made pools in Woolmer Forest. Creation of shallow pools in areas of suitable heathland to expand the population out from Woolmer. Grazing needs to be at moderate stocking densities to slow down pond succession and eliminate woody scrub but at a level that allows some patches of sedges and rushes to develop.

Spangled water beetle information

Malachius aeneus **Scarlet malachite beetle** **D**

Confined to one site in the New Forest, this species requires thatched roofs and open meadows with tall flowering grasses to provide a continuous source of pollen from late April until mid-July. **Scarlet malachite beetle information sheet**

Pachytychius haematocephalus **Gilkicker weevil** **B**

Fort Gilkicker only. Needs more common bird's-foot-trefoil (host) patches linked up and fencing/signage to stop trampling by the public.

Gilkicker weevil information

Sitaris muralis **Flame-shouldered blister beetle** **D/E**

The flame-shouldered blister beetle is only known from one site in the New Forest (Brockenhurst village). These beetles are parasites in the nest of the fairly common hairy-footed flower bees which nest in old brick walls. More information required on its ecology - survey and monitor.

Flame-shouldered blister beetle - New Forest National Park Authority

Bugs


Credit: Dominic Price

Cicadetta montana **New Forest cicada**

D

In England, this species has only ever been found in the New Forest and not since the early 1990s. It requires open grassy woodland rides and glades that are in plenty of sunshine, and sunny areas between open grass/heathland and woodland with a scrub edge. No grazing over spring and summer and regular clearance of bracken and scrub. A recent species recovery project has successfully imported a number of cicadas from France for captive breeding, to be eventually released into the New Forest.

New Forest Cicada - The Species Recovery Trust

Butterflies

Euphydryas aurinia **Marsh fritillary** **B**

Requires an uneven patchwork of grazed short and long vegetation by the end of the grazing period, between 8-25 cm high on damp grassland and 5-15 cm on chalk grassland. Requires Devil's-bit scabious but will occasionally use field scabious and small scabious on calcareous grassland. Requires extensive habitat networks of suitable habitat.

Marsh fritillary fact sheet

Hamearis lucina **Duke of Burgundy** **D**

Requires mosaics of poorly grazed scrubby chalk grassland and sunny clearings in ancient woodland. Main food plants are cowslip and primrose. Scrub is required on downland for shelter and for perching. It is also essential for providing shade to enable cowslips to flourish for longer. For woodland it is important to enhance rides and cut coppice on rotation, providing linkages between glades, rides, coupes.

Duke of Burgundy

Lasiommata megera **Wall** **B/E**

Declined significantly but could be making a comeback. A species possibly affected by climate change. Further data/research needed. Requires short open grasslands, also rides and glades and small patches of bare ground.

Nymphalis polychloros **Large tortoiseshell** **B**

Extinct resident, becoming re-established. Climate changes are in its favour, and it could easily re-establish in southern counties over the next 10-20 years. Not many recent Hampshire records, but regularly turning up on the Isle of Wight. Caterpillars feed primarily on elms but can also be found on aspen, birch, poplars and willows. Willows are needed for nectaring. Planting of disease resistant elms across Hampshire is taking place. More planting is needed in the south. Maintain hedgerows and shelterbelts with Elms. Do not tidy up edges as may contain Elm suckers. **UK Butterflies - Large Tortoiseshell - Nymphalis polychloros**

Satyrium w-album **White-letter hairstreak** **B**

Elm is the sole foodplant and so this species has suffered as a result of Dutch elm disease. Favourite sites are elms on the edge of deciduous woodland, but this species can also be found in more open habitat such as roadside verges, if suitable elms are present. More planting of disease resistant elm is needed, particularly in areas with recent records of white-letter hairstreak, more so in southern Hampshire. Over 4,000 whips have been planted between 2023 and 2025 by the Hampshire Forest Partnership across Hampshire.

UK Butterflies - White-letter Hairstreak - Satyrium w-album

Thecla betulae **Brown hairstreak** **B**

Still a priority species, although it has shown a significant range expansion in Hampshire over the last decade. This species lives in hedges, scrub, and woodland edges where young blackthorn, the primary larval foodplant, is abundant. The species has declined due to annual flailing which can destroy their eggs. Trim hedgerows once every three to five years, cut no more than a third each year and ensure that the hedges cut in any one year are in different areas. **Hedgerows for hairstreaks - Butterfly Conservation**

Caddisflies

Hagenella clathrata **Window winged sedge** **D**

Only found in four sites in UK. Not doing well except at Ancells Farm and Foxlease Meadows SSSI. Need to prevent scrub encroachment.

Window-winged sedge (caddisfly) - The Species Recovery Trust

Ironoquia dubia **Scarce brown sedge** **D**

Our rarest caddisfly. On western edge of its range, it needs dried up stream beds in summer. Only found in Pamber Forest SSSI stream. More targeted survey needed to confirm presence. **Scarce brown sedge (caddisfly) - information sheet - Buglife**

Clubmoss

Lycopodiella inundata **Marsh clubmoss** **D**

Found on wet heaths and bogs. Not uncommon in the New Forest, with scattered records in north-east Hampshire heaths, nearly all on SSSIs. Endangered and a Hampshire Responsibility species. Protect sites and maintain managed heath and hydrology. Create areas of bare exposed peat to boost regeneration. Expand habitat to improve connectivity.

Marsh clubmoss - The Species Recovery Trust

Conifers

Juniperus communis **Juniper** **D**

Has declined on the chalk and is now very rare in the New Forest.
Early successional habitat is needed for juniper to regenerate. Scrape back to create suitable grassland habitat then seed with juniper, preferably collected from bushes locally. Trial plots taking place at Martin Down, Butser Hill, and Danebury Hill Fort.

Saving England's Lowland Juniper - Plantlife

Crustacea

Austropotamobius pallipes **White-clawed crayfish** **D**

Once widely found in all Hampshire's chalk streams. Now only found in the Candover Stream, Cheriton Stream and River Arle in the upper reaches of the Itchen. Requires unpolluted shallow chalk streams and eradication of the North American signal crayfish, a carrier of the crayfish plague which has wiped out most native crayfish populations. Has been captive released back into the upper reaches of the Itchen by the Hampshire & Isle of Wight Wildlife Trust. Expand into other suitable 'Ark' sites where new populations can be established, safe from non-native crayfish and crayfish plague. Avoid removing downstream in-river structures where these are protecting white-clawed Crayfish from invasive signal crayfish and other non-native crayfish species.

White-clawed crayfish information sheet - Buglife

Dragonflies and damselflies

Somatochlora metallica **Brilliant emerald dragonfly** **B**

Found in north-east Hampshire around heathland pools and the Basingstoke Canal. Water quality is important for this species so maintaining water levels and quality is essential, along with sensitive cutting of emergent vegetation, dredging and pruning. Prefers shady edges with overhung trees. Target survey work to map emergence sites.

Fish

Salmo salar **Atlantic salmon** **C/D**

The River Test and River Itchen are two of only six chalk streams in the UK that are home to populations of Atlantic salmon. Measures include; removal or modification of water control/in-river structures that impede or delay upstream and downstream migration of adults and smolts, respectively; creation of a network of salmon sanctuary areas; targeted habitat enhancements and gravel cleaning to optimise spawning success (by keeping gravels clean) and juvenile success at key spawning locations; strategic tree planting to keep rivers cool and below salmon stress temperature thresholds; education of river users (wild swimmers and anglers) to avoid impacts and reduce disturbance of spawning adults, gravels and juvenile life stages (eggs and alevins) which live within the gravels; fisheries management measures to protect salmon populations (including fishing method restrictions and mandatory catch and release) and management for all life stages of salmon including riparian and in-river vegetation management and trout stocking.

See **Itchen Salmon Delivery Plan - Test and Itchen Association**

Credit: stproc

Flies

Asilus crabroniformis **Hornet robberfly** **B**

Heaths and grassland across Hampshire. The conversion of heaths and meadows to species-poor improved grasslands or arable land, replacing cattle with sheep and even under-grazing on nature reserves have reduced the robberfly's range. The robberfly larvae prey on dung beetle larvae from cattle dung. Sites require cattle grazing on insect-rich heaths and meadows.

Hornet robberfly - species management sheet - Buglife

Flowering plants

Allium oleraceum **Field garlic** **D**

Very rare. Found recently on several road verges in north Hampshire (Vice County 12) with some older records elsewhere. Likes grassy arable field margins, tracksides and road verges. Ensure all sites are managed by appropriate cutting to prevent dense grassland and scrub, avoiding July and August when flowering. Look to get the recent road verge into Road Verges of Ecological Importance (RVEI) management.

Anacamptis morio **Green-winged orchid** **B**

Indicator of high-quality grassland and declining. Maintain low soil fertility and ensure grazing is light and paused especially during flowering and seed-setting periods.

Arabis glabra now Turritis glabra **Tower mustard** **D**

Very rare. Main site at Kingsley on steep banked RVEI, plus another at Woolmer. Road verge sites requires at least annual and thorough scrub clearance and disturbance to ground to maintain open conditions. The seeds seem to be long-lasting, so populations have the potential to reappear on newly opened ground.

Cephalanthera rubra **Red helleborine** **D**

Very rare - one of only three sites in UK. Requires the dappled shade of clearings within mature beechwoods. Its intolerance of both shade and light-assisted competition mean that its survival requires careful, well-informed management of the habitat, and fencing is needed to discourage grazing by deer and rabbits. Recent funding received from Natural England for selective tree-felling, erection of an enclosure to protect the colony from trampling and browsing, and leaf-litter removal.

Cynoglossum germanicum **Green hound's-tongue** **D**

Rare and newly discovered in Hampshire in Rushmoor with significant populations. Maintain open woodland/plantation with bare ground and some disturbance. However, avoid soil compaction and waterlogging to retain important mycorrhizal fungi. There is an ongoing project under NE licence with the Species Recovery Trust to translocate individuals and try to expand the range. See - **Green hound's-tongue - The Species Recovery Trust**

Daphne mezereum **Mezereon** **D**

North Hampshire populations, all in (wet) woodland situations. Protect in situ with no disturbance. Maintain open conditions. Better management required at Greywell Moors SSSI.

Epipactis palustris **Marsh helleborine** **D**

Few sites in Hampshire outside of SSSIs. Found in neutral to calcareous fens, marshes, damp pastures, and meadows. Favours open unshaded flushed or seasonally inundated areas in which the intensity of competition from other vegetation is low. Important to maintain water levels.

Filago lutescens **Red-tipped cudweed** **D**

A Schedule 8 species in special management on an RVEI. Requires annual deep rotavation of the road verge over the winter, and extending further to include scrubbed up areas nearby, where it used to flourish.

Gentianella campestris **Field gentian** **D**

Rare in the New Forest and subject of a Species Recovery Trust initiative. Maintenance of habitat and appropriate grazing is essential. Extremely vulnerable to summer droughts.

Field gentian - The Species Recovery Trust

Gnaphalium sylvaticum **Heath cudweed** **D**

Rare and declining, found on the north-east Hampshire heaths in open areas. No longer present in the New Forest. Occurs on heaths, along the edges of forest rides, and tracks in areas of former heathland. Needs open conditions on infertile, damp or dry, sandy or gravelly acidic soils. Requires sporadic small-scale disturbance (e.g. forestry vehicles) to expose seedbank and create open conditions for germination. Needs research into its ecology and decline. Mostly on SSSIs.

Gymnadenia densiflora **Marsh fragrant-orchid** **D**

Habitat is rare, mostly SSSIs at Greywell Fen and Mapledurwell Fen. Found in base-rich wet meadows, fens, ditches and flushes mostly on SSSIs. Maintain hydrology and open conditions, grazing and no inputs - SSSI Site Management Plans.

Lobelia urens **Heath lobelia** **D**

Seven UK localities and only one in Hampshire, mostly within SSSI/SINC on edge of New Forest but with potential expansion. Subject of a Species Recovery Trust project. Requires scrub removal, disturbance creation for bare ground and introduction of herbivores.

Heath lobelia - The Species Recovery Trust

Lythrum hyssopifolia **Grass-poly** **D**

A Schedule 8 species, usually found in gravelly hollows, tracks, and ruts. Needs disturbance. Maintain conditions at its one site at Bourley Valley SSSI. Investigate translocations and potential habitat enhancement and expansion.

Credit: HBIC

Melampyrum arvense **Field cow-wheat** **D**

Only four sites in UK, one in Hampshire Skew Road RVEI at Portsdown where it is expanding onto the M27 motorway verge. This is a deliberately introduced population. The species favours dry chalky soils and requires open conditions. However, its parasitic nature means that full habitat clearance cannot be carried out, and a range of suitable host plants have to be retained alongside the cow-wheat. **Field cow-wheat - The Species Recovery Trust**

Pilularia globulifera **Pillwort** **D**

Although still widespread in the New Forest it has declined in areas in north-east Hampshire due to habitat loss and lack of management. Found in very shallow pools and pond edges on gravel/sandy/silty acidic substrates it colonises newly exposed pond edges but then declines as other species take over. Requires active management or poaching, and seasonally fluctuating water levels

Pillwort - Freshwater Habitats Trust

Pinguicula vulgaris **Common butterwort** **D**

Acid bogs. Eelmoor Marsh SSSI is the only site with recent records. Important to maintain the groundwater quality and quantity and extensive light grazing.

Fungi

Battarrea phalloides **Sandy stiltball** **D**

Battarrea phalloides has very site-specific habitat requirements and is found growing solitary to scattered on dry, sandy hedge banks sometimes growing amongst elm suckers. Hampshire is not a stronghold, but we should preserve what we have and encourage its spread to suitable sites. One site in the Corhampton area. Raise awareness with landowner, maintain habitat, and possible translocation? Survey and monitor.

Grasshoppers and crickets

Gryllotalpa gryllotalpa **Mole cricket** **B**

One New Forest population verified, 2014 to 2022 at Ladycross. Occurs on damp grazed New Forest lawns with seepages. Continue to monitor and maintain habitat, potential to discover other populations in the area and outside the New Forest. **Mole Cricket in the New Forest - ResearchGate**

Gryllus campestris **Field cricket** **D**

Was extinct but reintroduced at Shortheath Common SSSI in 2000 and 2001. It requires well managed heath with areas of sandy bare ground. Small scrapes or turf stripping are essential for maintaining populations.

Conserving our Wild: field crickets – a nature recovery project

Lichens

Placidium pilosellum **N/A** **B/E**

Only one record at Micheldever Spoil Heaps SSSI. Needs survey to establish whether still present and evaluation as to habitat requirements. Raise awareness with local Natural England Team to safeguard location.

Roccella phycopsis **N/A** **B**

Two locations in Hampshire: Portchester Castle churchyard and Hayling Island (Gable Head) churchyard on ancient stonework. Has been seen recently but not surveyed in detail. Maintain conditions and raise awareness with church wardens to safeguard locations.

Thalloidima sedifolium **N/A** **B**

One old location at Portsdown Hill SSSI. Needs new survey to establish whether still present. More recent records found at and near Micheldever Spoil Heaps SSSI. Best populations on the fuel tank site on railway land just off the SSSI. The species will soon become Red-listed. Maintain close sward and raise awareness with land managers to safeguard locations.

Usnea florida **Witches' whiskers lichen** **C**

Occurs on twigs and small branches, and very rarely on trunks, of a wide range of acid barked trees and shrubs such as hawthorn, birch, oak, and larch. Very susceptible to air pollution. Occurs almost wholly within the New Forest but not on old growth. Buffer known and potential host sites from pollution, e.g. dense tree and shrub planting. May expand naturally if air pollution continues to reduce.

Liverworts and mosses

Cephaloziella baumgartneri **Chalk threadwort** **D**

Nationally rare, in Hampshire only present at Netley Abbey. Protect and monitor species in situ. Has potential to be translocated to other old limestone buildings, e.g. Beaulieu Church.

Pallavicinia lyellii **Ribbonwort** **B**

A thallose liverwort, in Hampshire typically found at the base of Alder trees in wet woodland, or sometimes on tussocks of Carex paniculata. During a recent survey of the Hampshire populations by Callaghan (2019) it was confirmed from only three of about six of its former sites (all VC11), but at two of these only in very small quantity. The other more extensive population at Cadnam Common is still thriving. In September 2020 a new large population was discovered at Withycombe Shade on the Beaulieu River, in the east of the New Forest. **Status, conservation and ecology of Pallavicinia lyellii (research paper)**

Riccia fluitans **Floating crystalwort** **C**

An aquatic species, found as scattered plants or in dense masses floating on the surface of water in ponds, ditches, canals, gravel pits and marl pits. It prefers to grow in mesotrophic to eutrophic conditions. An indicator of good quality freshwater habitat, it has never been common and has declined significantly in Hampshire with the main stronghold likely to be the Basingstoke Canal. Old sites include Breamore Park, Sowley Pond and Fleet Pond. It also occurs at Swanwick Lakes nature reserve and was recently discovered at Allbrook Brickpits where habitat management might be needed. **Floating crystalwort - Atlas of British and Irish Bryophytes**

Mammals

Arvicola amphibius **European water vole** **C/D**

Water voles have undergone one of the most serious declines of any wild mammal in Britain during the 20th century. The intensification of agriculture in the 1940s and 1950s caused the loss and degradation of habitat, but the most rapid period of decline was during the 1980s and 1990s as American mink spread. Between 1989 and 1998, the population fell by almost 90 per cent. Water voles need dense vegetation to provide food and shelter from predators and soil that they can easily dig into to create burrows. 10m riparian buffers are recommended to prevent grazing up to the waters' edge to allow waterside vegetation to recover and prevent the banks being trampled and poached. Ensure that trees and scrub are managed so that they don't dominate the watercourse. Grassy buffer strips allow water voles to disperse, and provide links between suitable patches of habitat and other water vole populations. Only cutting one bank a year means there is always refuge for water voles to escape

to. Cutting the vegetation too short will cause slower regrowth meaning water voles lose cover for longer. Carrying out cutting late in the summer reduces the disturbance to water voles during the breeding season. Also needs bespoke management of mink population.

Helping water voles on your land - information guide

Castor fiber **European beaver** **D/E**

Whilst recognising that beaver activity can increase the complexity and diversity of a river system in terms of wetland habitat, species, and holding back the water, further research is needed. This research should establish the potential negative impacts that any reintroduction might have on local wetland communities and species of conservation concern. This is as a result of beavers' changes to hydrology, their burrowing and feeding, adverse impacts on fish migration and spawning grounds, increased sedimentation, and localised flooding. The species has been reintroduced at Ewhurst Park as part of a rewilding scheme. The New Forest Biodiversity Forum is considering all these impacts in relation to any call for re-introduction into the New Forest, although it is already believed to have established itself in the nearby Avon. Other sites are being identified for potential re-introduction.

Beaver reintroduction and its effects on freshwater biodiversity in Britain — Freshwater Biological Association

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Erinaceus europaeus **West European hedgehog** **A/B/E**

Hedgehogs live in a variety of habitats including woodland edges, hedgerows, parks, and gardens. More research is needed into rural hedgehog populations. For urban populations, wildlife friendly gardens, connectivity between gardens, green corridors, plus small mammal road warning signs, are ways to maintain and increase populations. **Hedgehog (Erinaceus europaeus) - Woodland Trust**

Martes martes **Pine marten** **B**

Recently re-introduced into the New Forest, the pine marten is now well established in several areas and successfully breeding. Aim to increase their population across the county. Work with the Vincent Wildlife Trust to assess feasibility of areas and improve and connect habitats before considering any re-introduction schemes. The pine marten predominantly inhabits forested habitat and has a home range of 1-6km. They are particularly vulnerable to road traffic and predation by foxes. Consider also the potential deleterious impacts pine martens might have on other species, if re-introduced. **Pine marten – The Vincent Wildlife Trust**

Micromys minutus **Harvest mouse** **B**

Nests in tall tussock grasses, reedbeds, ditches, and brambles, along hedgerows and woodland edges. Create and maintain grassy headlands around arable fields. Cut them on a 3–5-year rotation so that there is always suitable habitat for breeding, feeding, and overwintering. Monitor populations. More intense survey may well reveal additional populations, as has happened with the Selborne Landscape Partnership. **Farmers help bring back rare harvest mice to Hampshire - Farmers Weekly**

Mustela putorius **Polecat** **A/D**

The polecat, a solitary animal, occupies a variety of habitats, from farmland to woodlands to coastal sand dunes, and it typically dens in rabbit burrows, log piles, haystacks and farm buildings. Any re-establishment of polecats may be limited by the high density of road networks and traffic volume, and it is likely they will expand their range by themselves. Landscape-scale restoration of semi-natural habitat can only aid its recovery. However, covert releases of captive-bred polecats have masked their expansion and cross breeding with ferrets means many are not pure polecat. **Polecat – The Vincent Wildlife Trust**

Molluscs

Helicodonta obvoluta **Cheese snail** **B/E**

UK stronghold in South Downs, old beech forest (few sites), West Wood Winchester, East Hampshire Hangers, and Buriton chalk pit. Little appears to be known other than it requires old growth beech woods on the chalk, living in the leaf litter. Protect and maintain key sites, expand where possible to enable habitat continuity and ensure landowners are aware.

Cheese snails - The Living World of Molluscs

Vertigo (Vertigo) moulinsiana **Desmoulin's whorl snail** **B**

Most recent records include Winnal Moors and The Moors at Bishops Waltham, possibly still present in Basing Fen and Mapledurwell Fen. Requires long-established calcareous wetlands, usually where there is a tall growth of sedges, reed-grass or reed along with a wide variety of other emergent waterside vegetation. High ground water levels throughout the year are essential. Undertake further surveys to clarify current distribution and ensure landowners are aware of the presence and importance of conserving this snail, and appropriate methods of habitat management for its conservation. Expand habitat into suitable adjacent areas, encouraging growth of tall swamp vegetation. **Desmoulin's whorl snail (Vertigo moulinsiana) - JNCC**

Credit: HBIC

Moths

Adscita statices **Forester** **B**

Present in only two locations - Odiham Common SSSI and Martin Down SSSI. Management through light grazing to control scrub encroachment is recommended, but overgrazing is detrimental. Needs a medium-tall sward with abundant sorrel and nectar plants. As it has relatively poor dispersal, the focus must be on ensuring the optimum management of existing sites and the restoration and creation of semi-natural grassland in close proximity to existing colonies. **Forester moth - protecting rare pollinators - information guide**

Agonopterix atomella **Greenweed flat-body moth** **B/E**

This species is likely to still be present at Needs Ore, part of North Solent SSSI/ NNR, but access to survey is not permitted. Host plant is dyer's greenweed. Sites need to be actively managed to prevent coarse grasses and scrub from overgrowing and eliminating Dyer's Greenweed. This can be achieved through grazing or winter mowing. Look to SSSI management plan to evaluate population and measures required. **Agonopterix atomella - Hantsmoths**

Aleucis distinctata **Sloe carpet** **B/E**

Confined to the New Forest and requires additional survey. Larva feeds on Blackthorn - preference thought to be unmanaged bushes or thickets, although more research is needed on habitat requirements.

Sloe carpet - fact sheet - Butterfly Conservation

Coleophora vibicella **Large gold case-bearer** **B/E**

Found in rough pastures and woodland rides, where it feeds on the leaves and flowers of dyer's greenweed. Declining, and now very restricted - only recorded recently from Needs Ore (2015), Hayling Billy (2022), and Botley Wood (1995). These are nationally important colonies in Hampshire. Requires survey to determine current status and habitat needs, but avoid heavy summer grazing. As per Greenweed flat-body moth. **Moths on dyer's greenweed - fact sheet - Butterfly Conservation**

Cucullia lychnitis **Striped lychnis** **B/D**

Hampshire is an important national stronghold for the species, and managing road verges for dark mullein is important. Re-seed appropriate areas with dark mullein to expand populations.

Striped Lychnis | Butterfly Conservation

Cyclophora pendularia **Dingy mocha** **D/E**

Found in the New Forest and fringes of the New Forest, this species persists at very low density, amongst small bushes of sallow in boggy areas. Recommendations from Butterfly Conservation for a site in Dorset include rotational cutting of the of the sallow on a 3-year cycle so there will be a continuous supply of grey willow in the right condition to support the moth. Grazing should ideally be restricted so that it takes place between mid-September and mid-April. If required at other times, the density of stock should be low so that the new growth of grey willow, on which the larvae of dingy mocha depend, is not denuded. More surveys and landowner awareness needed. **Report on dingy mocha moth survey - Butterfly Conservation**

Noctua orbona **Lunar yellow underwing** **B**

Nationally scarce (Nb) in heaths, downland and open woodland. In Hampshire there are strong colonies in the Test Valley, at Harewood Forest, Porton Down, and Cholderton. They feed on a variety of grasses and herbaceous plants. Low intensity grazing is required, or where in woodland rides, the rides should be kept open and sunny by periodic clearance of rideside trees and scrub. Marginal strips of longer vegetation should be cut on rotation and not all cut in any one year. **Lunar yellow underwing - Butterfly Conservation**

Pechipogo strigilata **Common fan-foot** **B**

In Hampshire, its decline mirrors the national trend and until recently was only reliably found in Pamber Forest. However, in recent years, it has been found to have a relatively strong population in the Harewood Forest area. Preference for unmanaged mature oak woodland (damp). Larvae feed on pedunculate oak. Management requirements unknown, although lack of active management and/or the tidying of fallen trees and branches may have reduced potential habitat.

Common fan-foot - Woodland Wildlife Toolkit

Reptiles

Vipera berus **Adder** **B**

90% of adder populations surveyed have declined in UK. Requires undisturbed open heath/woodland mosaics with structural diversity. Habitat expansion and connectivity important.

Adder - Amphibian and Reptile Conservation Trust

Spiders

Agyneta mollis **Thin weblet** **B**

Local and scarce with significant decline. Only seven records post 1992. Bias towards damp grassland and wet woodland in the New Forest and southern Hampshire near Bishops Waltham SSSI, Idsworth Down, and Browndown. Also, near Noar Hill, Flagpond Copse, and Botley Wood SSSI. Target low level grazing of grasslands to maintain structural diversity on grasslands outside the New Forest.Table 3.3: Priority species assemblages for birds

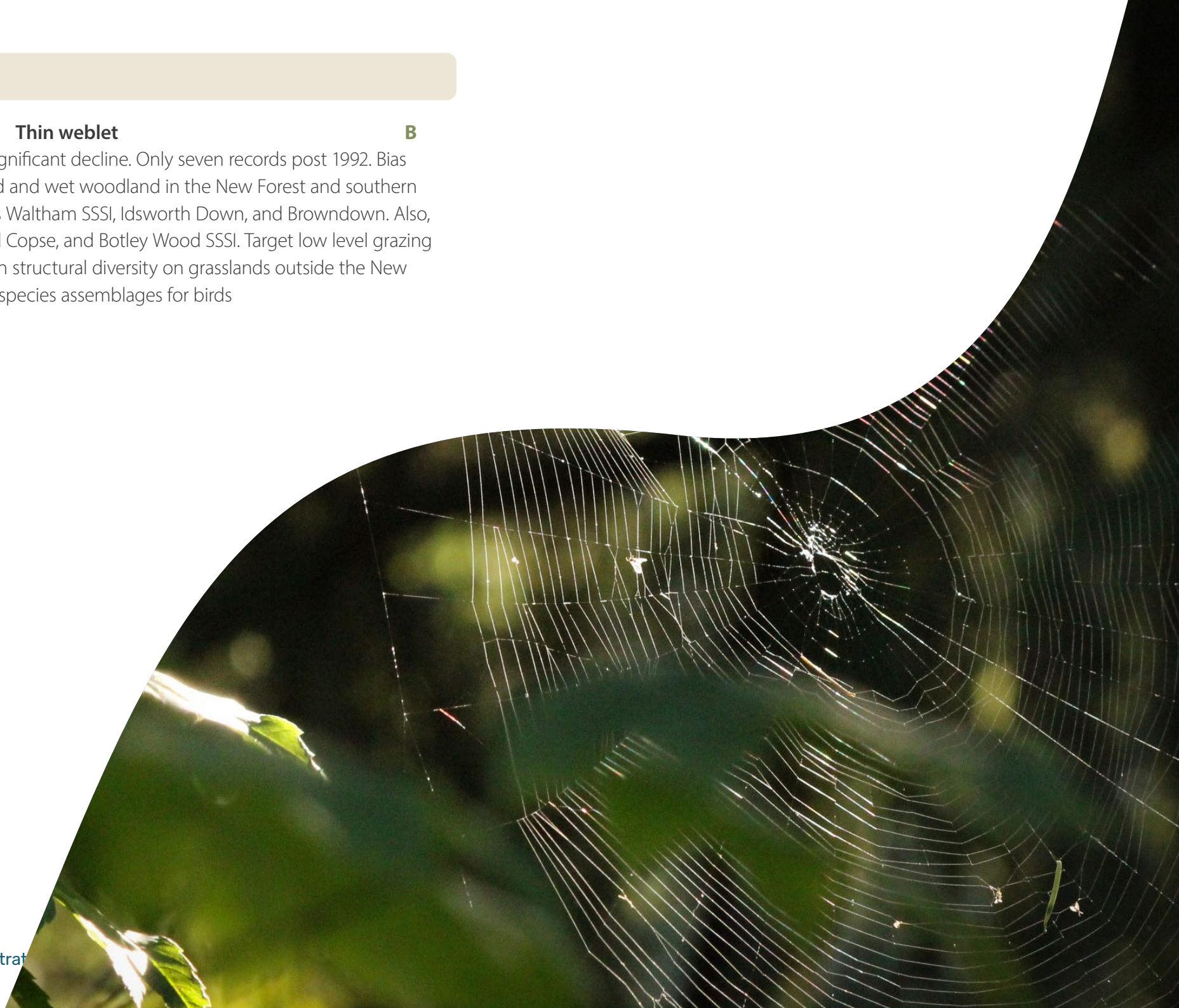


Table 3.3: Priority species assemblages for birds

Priority species assemblages for birds - breeding waders – wet grassland and heathland

Measures – Refer to habitat measures G2(PMP), G2(FGM), H2, H3, FR1, C2, C3, C4, C7

Across Hampshire, there has been a huge contraction in range for all these breeding birds as a result of drainage and other agricultural practices, predation and disturbance from human activity. Restore and expand areas of wet meadow, heathland, mire, and saltmarsh. Graze (ideally cattle) to provide a mosaic of suitable sward heights for nesting and feeding. Minimise grazing during the breeding season to reduce chance of trampling from livestock. Create small wader scrapes, hollows and pools to provide muddy areas for feeding. Consider use of predator fencing to protect nests and chicks. Minimise disturbance from human activity during breeding season.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Gallinago gallinago	Snipe	A/B

Snipe conservation - advice for farmers - RSPB

Numenius arquata	Curlew	A/B

Curlew conservation - advice for farmers - RSPB

Tringa totanus	Redshank	A/B/C

Redshank conservation - advice for farmers - RSPB

Vanellus vanellus	Lapwing	B/D

Declining nationally. Also found on heathland and farmland.

Lapwing conservation - advice for farmers - RSPB

Priority species assemblages for birds – birds of ancient coppice woodland

Measures – Refer to habitat measures W2, W3, W4, W8
Reintroduce coppicing, varying lengths of rotation to benefit different species e.g. tree pipits like newly coppiced areas, whereas medium and long rotation benefits others. They should be reasonable sized blocks to create a coarse mosaic of larger patches of scrub and coppice for nightingale and other species. Carry out some selective thinning to allow more light to reach the understorey along with the widening of rides. Creation of glades to increase variety of structure. Remove invasive woody species. Avoid heavy disturbance or a sudden or dramatic change in woodland structure which may impact hawfinch. Improve connectivity within the wider landscape through creation of scrubby areas, hedgerows, and soft edges between woodland and open habitats. Control deer numbers. Monitor populations to get a better idea of breeding range especially for woodcock, tree pipit and honey buzzard. Retention of deadwood where possible. Tackle recreational disturbance including predation from domestic dogs and cats.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Anthus trivialis **Tree pipit** **A/B/E**
Tree pipit also inhabits heath and farmland, so would need more specific management for heathland and general measures for farmland. For woodland, provide rides and glades, restore/maintain coppice with large coupes and/or sequential cutting of adjacent coupes (tree pipit will use early stage of coppice, preferably with standards) with scrubby, open mosaics at woodland edge (scattered trees in more open habitat).
Woodland Wildlife Toolkit

Coccothraustes coccothraustes **Hawfinch** **A/B**
Thin neglected mature woodland to improve structural diversity and create new woodland ensuring opportunity for thicket stages.
Woodland Wildlife Toolkit

Dryobates minor **Lesser spotted woodpecker** **A/B**
Thin mature woodland to encourage crown development, increase deadwood (standing and in-tree snags), retain, and replenish standards in coppice. Create new woodland to increase connectivity.
Woodland Wildlife Toolkit

Pernis apivorus **Honey-buzzard** **A/B**
Honey-buzzard | BTO - British Trust for Ornithology

Pyrrhula pyrrhula **Bullfinch** **B**
Declining nationally. Management should include enhancing shrub and ground layer by opening up the canopy and creating rides and edges to encourage scrub edge and seeding herbaceous plants.
Bullfinch | BTO - British Trust for Ornithology

Scolopax rusticola **Woodcock** **A/B/D**
Low breeding but high wintering numbers.
Woodland Wildlife Toolkit

Luscinia megarhynchos **Nightingale** **A/B/F**

Rapidly declining, only a few birds left in Hampshire. Scrubby habitats have become increasingly important over the last 30 years. For woodlands, ensure all stages of coppice are present at all times (sequential coppice of adjacent coupes, Nightingale favour medium growth stage (4-10yrs)). Allow dense scrub to develop along wood edge and in coppice for feeding and nesting habitat (takes ~7yrs for scrub to be sufficiently dense for breeding). Thin canopy to encourage dense shrub layer (incl. bramble) and enhance rides/glades to encourage a scrubby edge) **Woodland Wildlife Toolkit**
Managing scrub for nightingales - BTO

Muscicapa striata **Spotted flycatcher** **A/B/F**

Declining but doing okay in the New Forest. For woodlands, improve structure of woodland, enhance rides with irregular edges, retain/enhance deadwood for nesting and provide invertebrates for feeding, retain climbers such as ivy and honeysuckle, thin woodland edges to create diverse structure and provide invertebrates **Woodland Wildlife Toolkit**

Phoenicurus phoenicurus **Redstart** **A/B**

In Hampshire, only nest in the New Forest and doing well. Population has contracted elsewhere in the country. Management includes thinning to encourage crown growth (favour bigger trees) and buffer strips to woodland edge with semi-natural vegetation but open aspect. Retain deadwood (standing, fallen and in tree) **Woodland Wildlife Toolkit**

Phylloscopus sibilatrix **Wood warbler** **A/B**

Woodland bird. New Forest is a stronghold. Declining fast. Requires selective thinning to encourage crown development but retain shade and sub-canopy open structure. Restructure even-aged woods by small coupe felling or coppice (0.5-1 ha). Retain deadwood **Woodland Wildlife Toolkit**

Poecile palustris **Marsh tit** **A/B**

Requires thinning of crowded, immature woodland to encourage shrub layer regeneration, and/or restoring a percentage of neglected coppice (e.g. 15-20 yrs old) on long rotation coppice cycle with standards – young dense coppice required for foraging. Marsh tit breed low down in neglected coppice, so retention of some neglected coppice is recommended. Retain deadwood as nests in holes (including deadwood low in shrub layer) **Woodland Wildlife Toolkit**

Credit: wal_172619 Pixabay

Priority species assemblages for birds - farmland birds

Measures – Refer to habitat measures F1, F2, F3, F6, HD1
Aim for a range of different crops and habitats, including fallow areas throughout the year, and retain areas of stubble. Create and manage set aside areas that could support a mosaic of scrub, species-rich grassland, rough grassland, beetle banks, some bare ground, and ponds or small wader scrapes to provide water and muddy edges. Reduce pesticide use to increase insect and small mammal numbers, and to reduce secondary poisoning of barn owls. Manage hay meadows to produce a range of seeds for seed eating species. Create areas of scrub and avoid cutting all hedgerows annually to allow them to develop.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Burhinus oedicnemus **Stone-curlew** **B/D**
Specific measures for stone curlew and lapwing - create 1-5ha uncropped fallow plots with 30% bare ground. Retain the plot until the crop is harvested from late July for lapwing and late September for stone-curlew. Monitor breeding while protecting nests and chicks.
Create nesting plots for lapwing and stone curlew – Farming

Cuculus canorus **Cuckoo** **A/B/F**
Declining. Significant cuckoo decline in the New Forest. The principle host is dunnock, so to improve nesting opportunities, opening up the canopy in woodland to allow the shrub layer to develop may increase nesting opportunities for dunnocks and, therefore, cuckoos.
Cuckoo decline | BTO - British Trust for Ornithology

Emberiza calandra **Corn bunting** **B/D**
Red listed, some recovery. **Corn bunting conservation - advice for farmers - RSPB**

Emberiza citrinella **Yellowhammer** **B**
Red listed, limited numbers on heaths. **Yellowhammer conservation - advice for farmers - RSPB**

Falco tinnunculus **Kestrel** **B**
Wider farmland, declining. **Kestrel | BTO - British Trust for Ornithology**

Linaria cannabina **Linnet** **B**
Linnet conservation - advice for farmers - RSPB

Vanellus vanellus **Lapwing** **B/D**
Lapwing conservation - advice for farmers - RSPB

Perdix perdix **Grey partridge** **B**
Grey partridge conservation - advice for farmers - RSPB

Streptopelia turtur **Turtle dove** **A/B/F**
Also a heathland bird. Has declined rapidly, and now only found at 2-3 sites in Hampshire. **Conservation advice from Operation Turtle Dove**

Tyto alba **Barn owl** **B/D/E**

Include erection of nest boxes in pairs (within 500m of each other) at a density of about one pair per 500m square in barns or trees.

Barn owl conservation - advice for farmers - RSPB

Alauda arvensis **Skylark** **B**

Declining nationally. **Skylark conservation - advice for farmers - RSPB**

Priority species assemblages for birds – heathland birds

Measures – Refer to habitat measures H1, H2, H3, H5

Improve connectivity within the wider landscape by connecting open areas to wide rides within woodlands and scrubby edges to woodlands. Restore open habitats within woodlands, especially heathland, with scattered trees. Ideally these areas should be grazed to create structural diversity and encourage invertebrates. Create and maintain areas of bare ground and short, sparse swards with tussocky areas nearby for woodlarks. Monitor populations, especially those away from heathlands. These species breed in a range of habitats except for Dartford warbler, which is primarily gorse and heathland, although has been found along the coast. Creation of ponds and wet areas where suitable, to support dragonflies and damselflies for hobbies.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Lullula arborea **Woodlark** **B**

Woodlark found increasingly off heaths. **Woodlark - Norfolk Biodiversity Action Plan**

Curruca undata **Dartford warbler** **B**

Doing quite well but can be severely impacted by harsh winter weather.

Dartford Warbler | BTO - British Trust for Ornithology

Falco subbuteo **Hobby** **B**

Possible decline in woodlands due to goshawks, otherwise doing okay.

Hobby | BTO - British Trust for Ornithology

Caprimulgus europaeus **Nightjar** **B**

Also breeds in marginal habitat on farmland and more recently on the coast at Keyhaven Marshes (SSSI). **Woodland Wildlife Toolkit**

Priority species assemblages for birds - birds of rivers, lakes and reedbed

Measures – Refer to habitat measures R1, R2, R6, P4, FR2
Require general wetland and river improvements, including better water quality. Wetland and reedbed management aimed at bitterns also benefits other species including marsh harriers, bearded tits, and a range of invertebrates, fish, and mammals. A 2024 paper in British Birds Journal (White et al.) identified key actions to follow for encouraging bitterns to breed. Management should be adapted to reflect this and other detailed guidance on reedbed management. Pochard decline may be due to mild winters on the continent reducing the need to migrate to the UK. Continue to monitor and, if necessary, control mink and other non-native species.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Aythya ferina **Pochard** **B/C**
Lakes and ponds. Red listed, some breeding - priority for the small breeding population. **Pochard | BTO - British Trust for Ornithology**

Botaurus stellaris **Bittern** **A/B**
Slowly increasing in numbers but not bred yet. Bitterns: booming, or boom and bust? **Bitterns: booming, or boom and bust? - British Birds**

Circus aeruginosus **Marsh harrier** **A/B/C**
Coastal marsh and reedbeds. Increasing the restoration and re-creation of reedbed habitats for other reedbed specialists is likely to have helped Marsh Harriers.

Panurus biarmicus **Bearded tit** **A/B**
Nests in three locations. Bearded tits depend on Phragmites reedbeds and therefore habitat availability is likely to limit their distribution. The creation and restoration of reedbeds to help other specialist species, such as bittern, is therefore likely to have helped drive population increases.

Alcedo atthis **Kingfisher** **A/C**
Severe winters are main driver to decline but improvements to water quality and the provision of new wetland habitats will benefit this species. **Kingfisher | BTO - British Trust for Ornithology**

Charadrius dubious **Little Ringed Plover** **B**
Breeds on flat, undisturbed gravel with scattered pools, on gravel islands in rivers and also partially flooded fields. Main threats are disturbance and predation. Mesh cages could help protect eggs and chicks from predation, especially on shingle islands. **Little Ringed Plover | BTO - British Trust for Ornithology**

Priority species assemblages for birds - shore birds – breeding, migrating and wintering

Measures – Refer to habitat measures C1, C2, C3, C4, C5 and C7
Protect from disturbance and predators. Wardening is key. Create new breeding areas including use of mesh-sided rafts, shingle islands, scrapes, and pools to benefit species all year. Consider use of mesh fencing and nest trays being trialled at Calshot for oystercatchers, and at Gunner Point and Hurst Spit. Potential for some managed realignment and creation of new saltmarsh and shingle. Monitor populations.

The English Seabird Conservation and Recovery Pathway ESCaRP (Natural England) has a series of recommendations to reverse seabird decline and implement actions at key breeding sites on nationally designated sites. These could be implemented elsewhere.
English seabird conservation and recovery pathway - Technical report - NERR134

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Charadrius hiaticula Ringed plover **B**
Ringed Plover | BTO - British Trust for Ornithology

Chroicocephalus ridibundus Black-headed gull **B**
Declining - significant amount of UK population in Hampshire. Vulnerable to flooding and predation.

Haematopus ostralegus Oystercatcher **B/C**
Declining in Europe, a stronghold on our coasts - **Oystercatcher - Bird Aware Solent**

Ichthyaetus melanocephalus Mediterranean gull **B**
Big increase from low base and half UK population in Hampshire. Vulnerable to flooding and predation. Also a balancing act as they predate tern chicks.

Recurvirostra avosetta Avocet **B**
4-5 breeding locations. **Avocet | BTO - British Trust for Ornithology**

Sterna hirundo Common tern **B/C**
Breeds at low numbers at about a dozen locations along the coast plus inland at Fleet Pond. Certain parts of the Solent are also important for passage birds roosting in July-September e.g. Hill Head and Sandy Point. Disturbance is an issue.

Sternula albifrons Little tern **B/C/D**
Wardening of little tern breeding colonies is a key conservation tool.
Little Tern | BTO - British Trust for Ornithology

Thalasseus sandvicensis Sandwich tern **B/C**
Sandwich Tern | BTO - British Trust for Ornithology

Priority species assemblages for birds – urban birds

Measures – Refer to habitat measures U1
All species declining nationally. Create and improve management of species-rich grassland, wetland, hedgerows and pockets of scrub in urban areas and improve connectivity within the landscape. Link with sustainable drainage systems (SuDS), e.g. de-paving. Provide suitable nest boxes where there are no natural nests present and preserve existing nest sites through partnership working. Engage with businesses and the public to educate them about these species and encourage their involvement in conservation of urban birds.
Sustainable drainage systems - a guide for local authorities and developers

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Passer domesticus	House sparrow	D

House Sparrow | BTO - British Trust for Ornithology

Sturnus vulgaris	Starling	D

Starling | BTO - British Trust for Ornithology

Delichon urbicum	House martin	D

Create small scrapes in suitable areas to provide muddy material for natural nest building. **House Martin | BTO - British Trust for Ornithology**

Apus apus	Swift	D

Encourage developers to add swift bricks to all new housing stock.
Hampshire Swifts | BTO - British Trust for Ornithology

Priority species assemblages for birds – urban gulls

Measures
Habitat management improvements and the creation of wetlands in urban settings and in the wider countryside should benefit these species. Work with businesses and landowners to allow breeding in urban areas (mostly on roofs) and minimise conflict with people. Remove netting on buildings. Monitor populations.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Larus argentatus	Herring gull	D

Herring Gull | BTO - British Trust for Ornithology

Larus fuscus	Lesser black-backed gull	D

Lesser black-backed gull | BTO - British Trust for Ornithology

Credit: David Moreton

Priority species assemblages for birds - wintering birds (shore and grassland)

Measures- Refer to habitat measures C2, C3, C4, C5, C7, WB1, P3 and F4

Work with farmers to provide suitable crop or set-aside land in the winter months for geese and waders to feed on. Create and manage diverse coastal grasslands, marshes with ditches, and wader scrapes or lagoons. This will benefit a wide range of species. These areas should ideally be grazed to provide a suitable sward height for birds during the summer but left ungrazed in the winter. Reduce grazing levels at times due to breeding waders. Reduce recreational disturbance through education.

The role of wildfowl refuges on agricultural land in lessening the conflict between farmers and geese in Britain – Study – Conservation Evidence

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Branta bernicla bernicla	Dark-bellied brent goose[6]	**B/C**
Brent goose | BTO - British Trust for Ornithology		
Limosa limosa	Black-tailed godwit	**B/F**
Black-tailed godwit | BTO - British Trust for Ornithology		

6 There are three sub-species of brent geese. Only the sub-species: dark-bellied brent goose (*Branta bernicla bernicla*) occurs regularly in the Solent

Table 3.4: Species assemblages – other species groups

Priority species assemblage rare arable plants and other species associated with arable farmland

Measures – Refer to habitat measure F5
Requires low-input arable management, adjacent or on known sites. Cultivate margins in the spring between February and April or in the autumn between September and November. Do not apply any fertilisers, manures or pesticides except for herbicides to weed-wipe or spot-treat for the control of injurious weeds and invasive non-natives.
Managing Arable Farm Land - Plantlife - Links below point to 'Back from the Brink' factsheets and management guidance, and information on distribution.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Beetles

Carabus monilis **Necklace ground beetle** **A/B**
Associated with cultivated land and arable field margins. Avoid winter tilling, pesticide use, and soil disturbance that may damage the larvae. Create and manage field margins and headlands that will provide refuges and hibernation areas for the ground beetles, and encourage populations of other invertebrates that they can prey on. A continuity of appropriately managed fields and field margins across the landscape will facilitate the spread of this species back across its former range. **Necklace ground beetle - species management - Buglife**

Flowering plants

Adonis annua **Pheasant's-eye** **B**
S41 Rare. **Adonis annua Pheasant's-eye | Game and Wildlife Conservation Trust**

Ajuga chamaepitys **Ground-pine** **B**
S41 Rare. **Ground pine - information guide - Back from the Brink | Ajuga chamaepitys – national status**

Anthemis arvensis **Corn chamomile** **B**
Not known if it is still extant in Hampshire. Occurs in wild seed mixes. Target where native. **Anthemis arvensis - national status**

Anthemis cotula **Stinking chamomile** **B**
Vulnerable. **HRPR Anth cotul.pdf**

Briza minor **Lesser quaking-grass** **B**
Rare. **Briza minor - Hampshire distribution**

Fumaria parviflora **Fine-leaved fumitory** **B**
Threatened. **Fumaria parviflora Lam. in BSBI Online Plant Atlas 2020**

Fumaria vaillantii **Few-flowered fumitory** **B**
Endangered. **Fumaria vaillantii Loisel. in BSBI Online Plant Atlas 2020**

Galeopsis angustifolia **Red hemp-nettle** **B**

S41 Rare. **Red hemp-nettle - Back from the Brink**

Gastridium ventricosum **Nit-grass** **B**

Rare. **Gastridium ventricosum (Gouan) Schinz & Thell. in BSBI Online Plant Atlas 2020**

Buglossoides arvensis **Field gromwell** **B**

Endangered and declining. **Buglossoides arvensis (L.) I.M.Johnst. in BSBI Online Plant Atlas 2020**

Misopates orontium **Weasel's-snout** **B**

Vulnerable. **Misopates orontium (L.) Raf. in BSBI Online Plant Atlas 2020**

Myosurus minimus **Mousetail** **B**

Vulnerable and much declined. **Myosurus minimus L. in BSBI Online Plant Atlas 2020**

Roemeria (Papaver) argemone **Prickly poppy** **B**

Endangered. **Roemeria argemone (L.) C.Morales, R.Mend. & Romero García in BSBI Online Plant Atlas 2020**

Ranunculus arvensis **Corn buttercup** **B**

S41 and Endangered. **Corn buttercup - Back from the Brink**

Scandix pecten-veneris **Shepherd's-needle** **B**

S41 and Endangered. **Scandix pecten-veneris L. in BSBI Online Plant Atlas 2020**

Scleranthus annuus **Annual knawel** **B**

S41 and Endangered. Declining. **Annual knawel - Back from the Brink**

Silene gallica **Small-flowered catchfly** **B**

S41 and Endangered although population potentially increasing due to climate change, frequent more towards Bournemouth area. **Small-flowered catchfly - Back from the Brink**

Silene noctiflora **Night-flowering catchfly** **B**

Vulnerable. **Silene noctiflora L. in BSBI Online Plant Atlas 2020**

Teucrium botrys **Cut-leaved germander** **B**

Schedule 8 and Hampshire stronghold. **Teucrium botrys L. in BSBI Online Plant Atlas 2020**

Torilis arvensis **Spreading hedge-parsley** **B**

S41 and Endangered. **Spreading hedge-parsley - Back from the Brink**

Valerianella dentata **Narrow-fruited cornsalad** **B**

Endangered and Hampshire stronghold. **Valerianella dentata (L.) Pollich in BSBI Online Plant Atlas 2020**

Valerianella rimosa **Broad-fruited cornsalad** **B**

S41, Endangered and Hampshire stronghold.

Broad-fruited cornsalad - Back from the Brink

Measures – Refer to habitat measures P1 and P2
Common toads have declined by 68% over the last 30 years in the UK. They prefer deeper water bodies in which to breed. Restore ponds - de-silt, deepen, whilst maintaining gentle sloping edges, maintain water levels, and improve water quality. Maintain and extend semi-natural habitat surrounding pond but manage so ponds are not over-shaded. Establish crossing signage/patrols if roads cross migration routes and consider use of Traffic Regulation Orders

Great crested newts (GCNs) have also suffered huge declines. A conservation strategy is in place through district licencing. GCNs favour medium size ponds with abundant weeds, a well-developed litter layer and no fish. Connectivity to other ponds is important as is undisturbed semi-natural vegetation adjacent to ponds with lots of deadwood, but no overshading.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Amphibians

Bufo bufo **Common toad** **B**

Widespread in the UK but numbers declining rapidly. Threatened by a loss of breeding ponds and disruption of migration routes.

Common Toad - Froglife

Triturus cristatus **Great crested newt** **B**

Populations are thought to have declined dramatically throughout the species' European range.

Great crested newt (Triturus cristatus) - Special Areas of Conservation (jncc.gov.uk)

Measures – Refer to habitat measures R1, R2, R3, R4, R5, R6, R7, R8, R9, NN1 and P1

Many of our chalk streams suffer from over abstraction of water, pollution, and habitat loss, but there are actions that can restore good ecological health to these unique rivers, leading to improved water quality and flow, well-oxygenated water and clean gravels

Riparian and in-river restoration or enhancement should include; restoration of connectivity between floodplain and the chalk stream; use of riparian buffers to reduce nutrient and sediment load, restoration or re-creation of lost or relic meander patterns; restoration of spring-line calcareous fens and flushes; restoration of wet woodland and riparian meadows; and creating changes in flow patterns, which alters the bed morphology and moves silt and uncovers gravels. Other measures include restoring backwaters and backchannels to provide fish spawning and riparian habitats along the river including the introduction of woody material in appropriate places to restore habitat diversity, and riparian tree planting to increase shading of river channels and to counter the effects of increased temperatures, but not where it shades out aquatic macrophytes, and establishing passes to overcome or remove barriers to migration upriver.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Dragonflies and damselflies

Coenagrion mercuriale **Southern damselfly** **B**

An Annex II (Habitats Regulations) species. Southern damselflies breed in slow-flowing heathland streams but away from the New Forest they can be found breeding in our chalk streams where they requires base-rich, unpolluted shallow water with a permanent slow-to-moderate flow. Habitat requirements include maintaining adjacent habitat in mid-successional conditions with appropriate livestock grazing to prevent vegetation from encroaching into the channel. Some poaching is required to maintain open conditions. Where channels have become shaded by trees or scrub, careful clearance will reduce water loss through transpiration and remove barriers to dispersal. Monitor populations.
Southern damselfly - Back from the Brink

Fish

Anguilla anguilla **European eel** **C/D**

Recorded in most of our rivers, most recent records in Itchen, Test, and New Forest streams. **European eel - status assessment**

Cottus gobio **Bullhead** **B/C**

Bullhead (Cottus gobio) - Special Areas of Conservation

Lampetra planeri **Brook lamprey** **B/C**

Ecology of the River Brook and Sea Lamprey - IN104

Petromyzon marinus **Sea lamprey** **C/D**

A rare migrants, which probably used to be present in larger numbers in the Solent and in the Lower Test and Lower Itchen.

Salmo salar **Atlantic salmon** **C/D**

Itchen Salmon Delivery Plan - Test and Itchen Association

Salmo trutta subsp. Fario **Brown trout** **C/D**

South Coast Sea Trout Project | Wild Trout Trust

Salmo trutta subsp. trutta **Sea trout** **C/D**

Four principal sea trout rivers in Hampshire are the Test and Itchen, Beaulieu, and Lymington. **South Coast Sea Trout Project | Wild Trout Trust**

Thymallus thymallus **Grayling** **C/D**

Scarce. **European Grayling Conservation, Ecology and Management**

Mayflies

Baetis niger **Southern iron blue** **A**

An indicator of the health of rivers and widespread in the Test and Itchen, this species requires good water quality to survive and is thought to be particularly affected by low flows. Any operations that affect the bed such as dredging, channel modifications or gravel removal should be avoided. Weed cutting and removal of bankside trees may also be detrimental to this species.

Baetis niger - species dossier - Buglife

Mammals

Lutra lutra **Otter** **B**

Historically, otters occurred over most of the UK. However, persecution, habitat loss and, more recently, the impact of toxic organochlorine insecticides caused a marked reduction in the range of the species. The otter is still scarce over much of England, where the highest concentrations are in the south-west. However, recent surveys suggest that the otter population is recovering well and recolonising parts of its former range. They require an abundant supply of food (normally associated with high water quality), together with suitable habitat, such as vegetated river banks, islands, reedbeds and woodland, which are used for foraging, breeding and resting.

Neomys fodiens **Eurasian water shrew** **B/C**

Water shrews are semi-aquatic and are found in habitats close to water, including on the banks of streams and rivers, and near ponds, drainage ditches, reed-beds and fens. They can be numerous at water-cress beds. Likely reasons for the decline in their numbers are habitat loss and water pollution. Requires good water quality and low disturbance to bankside vegetation. Riparian buffers to connect bankside habitat required to enhance population. Measures similar to water vole. More data on populations within the county is needed to assess species requirements. **Water shrew — Mammal Society**

Molluscs

Odhneripisidium tenuilineatum **Fine-lined pea mussel** **C/E**

Scattered records from the northern chalk streams, Itchen and Test. Very little is known about them. Pollution, sedimentation and habitat degradation are thought to be major factors in its decline. Would benefit from general protection and restoration of wetland habitats, and implementing pollution control measures.

Priority species assemblage - other rivers including the New Forest rivers and streams

Measures – Refer to habitat measures R1, R2, R3, R4, R5, R6, R7, R8, R9, NN1 and P1

Similar to chalk streams, many of our other rivers suffer from over abstraction of water, pollution, and habitat loss. The New Forest's rivers and streams are internationally important and support a variety of species, including fish, insects, amphibians, and mammals. Measures to improve water quality and riparian habitat should include; restoration of connectivity between floodplain and river; use of riparian buffers to reduce nutrient and sediment load, restoration or re-creation of lost or relic meander patterns; restoration of wet woodland and riparian meadows; creating changes in flow patterns, which alters the bed morphology and moves silt and uncovers gravels, restoring backwaters and backchannels to provide fish spawning and riparian habitats along the river including the introduction of woody material in appropriate places to restore habitat diversity, and riparian tree planting to increase shading of river channels to counter the effects of increased temperatures; and establishing passes to overcome or remove barriers to migration upriver.

The following table lists the species's *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Dragonflies and damselflies

Coenagrion mercuriale **Southern damselfly** **B**

An Annex II (Habitats Regulations) species, Southern damselflies breed in slow-flowing heathland streams and runnels with plenty of plant-life, but not shaded by trees and scrub. Away from the New Forest they are found breeding in chalk streams in Hampshire. Habitat requirements include maintaining adjacent habitat in mid-successional conditions with appropriate livestock grazing to prevent vegetation from encroaching into the channel. Some poaching is required to maintain open conditions. Where channels have become shaded by trees or scrub, careful clearance will reduce water loss through transpiration and remove barriers to dispersal. Monitor populations. **Southern damselfly - Back from the Brink**

Fish

Anguilla anguilla **European eel** **C/D**

Recorded in most of our rivers including the New Forest streams.

European eel - status assessment

Cottus gobio **Bullhead** **B/C**

Bullhead (Cottus gobio) - Special Areas of Conservation

Lampetra planeri **Brook lamprey** **B/C**

Ecology of the River Brook and Sea Lamprey - IN104

Salmo salar **Atlantic salmon** **C/D**

Itchen Salmon Delivery Plan - Test and Itchen Association

Salmo trutta subsp. Fario **Brown trout** **C/D**

South Coast Sea Trout Project | Wild Trout Trust

Salmo trutta subsp. trutta **Sea trout** **C/D**

Four principal sea trout rivers in Hampshire are the Test and Itchen, Beaulieu, and Lymington. **South Coast Sea Trout Project | Wild Trout Trust**

Thymallus thymallus **Grayling** **C/D**

Scarce. **European Grayling Conservation, Ecology and Management**

Mammals

Lutra lutra **Otter** **B**

Historically, otters occurred over most of the UK. However, persecution, habitat loss and, more recently, the impact of toxic organochlorine insecticides caused a marked reduction in the range of the species. The otter is still scarce over much of England, where the highest concentrations are in the south-west. However, recent surveys suggest that the otter population is recovering well and recolonising parts of its former range. They require an abundant supply of food (normally associated with high water quality), together with suitable habitat, such as vegetated river banks, islands, reedbeds and woodland, which are used for foraging, breeding and resting.

Neomys fodiens **Eurasian water shrew** **B/C**

Water shrews are semi-aquatic and are found in habitats close to water, including on the banks of streams and rivers, and near ponds, drainage ditches, reed-beds and fens. They can be numerous at water-cress beds. Likely reasons for the decline in their numbers are habitat loss and water pollution. Requires good water quality and low disturbance to bankside vegetation. Riparian buffers to connect bankside habitat required to enhance population. Measures similar to water vole. More data on populations within the county is needed to assess species requirements. **Water shrew — Mammal Society**

Credit: JStolp

Priority species assemblage calcareous sedge communities

Measures – Refer to habitat measure FR1
Appropriate grazing and other vegetation management essential. Maintain/restore hydrology. Restore and create wetland habitat especially adjacent to the sites.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Flowering plants

Carex diandra **Lesser tussock-sedge** **D**

Rare - now very scarce, restricted to a few fen habitats in north Hampshire (Vice County 12) at Greywell Fen, Stockbridge North Fen and Bransbury Common – all are SSSIs.

Carex dioica **Dioecious sedge** **D**

Requires very short vegetation in calcareous fen. Very few sites: Bransbury Common and Mapledurwell Fen – both SSSIs.

Credit: Botanical Society of Britain and Ireland

Priority species assemblage - Coastal grazing marsh and upper saltmarsh

Measures – Refer to measures C2 and C3
Maintenance of existing habitat inside and peripheral to protected sites. Requires light grazing, aiming for low levels of disturbance, such as trampling, which could damage the flora and fauna, and contribute to erosion. Expand the area of grazing marsh by reintroducing appropriate water level management on improved grassland and arable land. This should be targeted to ensure the expansion and linkage of existing sites and to promote functioning coastal floodplains.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Flowering plants

Bupleurum tenuissimum **Slender hare's-ear** **B**
S41. Important Hampshire populations.

Carex divisa **Divided sedge** **B**
Scarce S41 species, Hampshire stronghold.

Carex punctata **Dotted sedge** **B**
Scarce and infrequent, Hampshire stronghold.

Hordeum marinum **Sea barley** **B**
S41. Might be vulnerable to coastal erosion.

Oenanthe lachenalii **Parsley water-dropwort** **B**
Listed as Near Threatened in England, it is still widespread and locally frequent on the Hampshire coast.

Polypogon monspeliensis **Annual beard-grass** **B**
Nationally scarce although native distribution obscured by alien introductions around waste ground, railway lines, quarries, newly constructed habitats along the coast from bird and grass seed.

Puccinellia fasciculata **Borrer's saltmarsh-grass** **B**
S41. Declining as a result of the infilling of pools and ditches, the upgrading of sea-walls and the conversion of coastal grazing marshes to arable

Puccinellia rupestris **Stiff saltmarsh-grass** **B**
Nationally scarce. Found on bare mud and damp brackish hollows around sea walls. A Hampshire stronghold.

Trifolium fragiferum **Strawberry clover** **B**
Locally common in Hampshire.

Trifolium scabrum **Rough clover** **B**
Scattered along the coast, more on sand and gravel.

Trifolium squamosum **Sea clover** **B**
Scarce and declining on the Hampshire coast and elsewhere.

Bees, wasps and ants

Colletes halophilus **Sea aster bee** **B/D**

A ground nesting bee associated with sea aster. Creating habitat near large strands of sea aster could offer new opportunities for this species. For example, creating an undulating surface with pits and mounds could provide a range of microhabitats and microclimates that mimic their natural habitat. They would also benefit from the maintenance of bare ground by scraping back to bare earth.

Sea aster mining bee - management guidance sheet - Buglife

Measures – Refer to measures C2 and C3
Protect and manage the habitat. Manage water quality, water levels and salinity levels at as stable a level as possible. Manage the margins - they are also important to many invertebrates. Prevent emergent plants from encroaching on the habitat and protect landward habitat for the lagoon to retreat to as sea level rises. Saline Lagoons - Buglife

The following table lists the species's *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Sea anemones

Nematostella vectensis **Starlet sea anemone** **B**

Only 2 records; Mengham Salterns, East Haying and at Lymington and Keyhaven Marshes. Re-survey.

Molluscs

Semisalsa stagnorum **Lagoon spire snail** **B**

Only 3 records, from 1988. Farlington Marshes. Possibly died out due to rise in salinity. **Lagoon spire snail (Willing M. & Rowson B. (2020)**

Stoneworts

Lamprothamnium papulosum **Foxtail stonewort** **B**

Recorded in three saline lagoon locations, all SSSIs: Keyhaven, Gilkicker and Haslar Lake. Protect and manage the habitat. Manage water quality, water levels, and keep salinity levels at as stable a level as possible. Manage the margins, they are also important to many invertebrates. Prevent emergent plants from encroaching on the habitat and protect landward habitat for the lagoon to retreat to as sea level rises.

Foxtail stonewort (Lamprothamnium papulosum) - MarLIN - The Marine Life Information Network

Credit: Robert Aguilar

Priority species assemblage shingle and coastal grassland communities

Measures – Refer to measure C1
Maintain existing habitat inside and peripheral to protected sites and have regard to this species in the consideration of any coastal defence works. Expand where possible and educate to minimise disturbance including from trampling. Coastal vegetated shingle - Buglife

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Flowering plants

Atriplex laciniata **Frosted orache** **B**
Rare.

Crambe maritima **Sea-kale** **B**
Hampshire stronghold.

Eryngium maritimum **Sea-holly** **B**
Uncommon and vulnerable to coastal erosion.

Frankenia laevis **Sea-heath** **B**
Vulnerable to coastal erosion with only two main locations, near Fawley Power Station and east Hayling Island on SSSIs. A mat-forming perennial herb of shingle-saltmarsh transitions.

Geranium purpureum **Little-robin** **B**
Rare shingle plant, possibly threatened by coastal erosion.

Polygonum maritimum **Sea knotgrass** **B**
Schedule 8 species. Rare, vulnerable to coastal erosion.

Salsola kali **Saltwort** **B**
Vulnerable to coastal erosion and quite rare in Hampshire.

Salsola kali subsp. kali **Prickly saltwort** **B**
S41 species. Vulnerable to coastal erosion and quite rare in Hampshire.

Silene nutans **Nottingham catchfly** **B**
Rare and possibly vulnerable to coastal erosion. Hampshire stronghold.

Trifolium suffocatum **Suffocated clover** **B**
Hampshire stronghold.

Lichens

Rinodina aspersa **N/A** **B/E**
A species of coastal shingle, only one site at Browndown SSSI. Has been re-found recently but needs more detailed survey and evaluation as to habitat requirements. Raise awareness with local Natural England team to safeguard location.

Moths

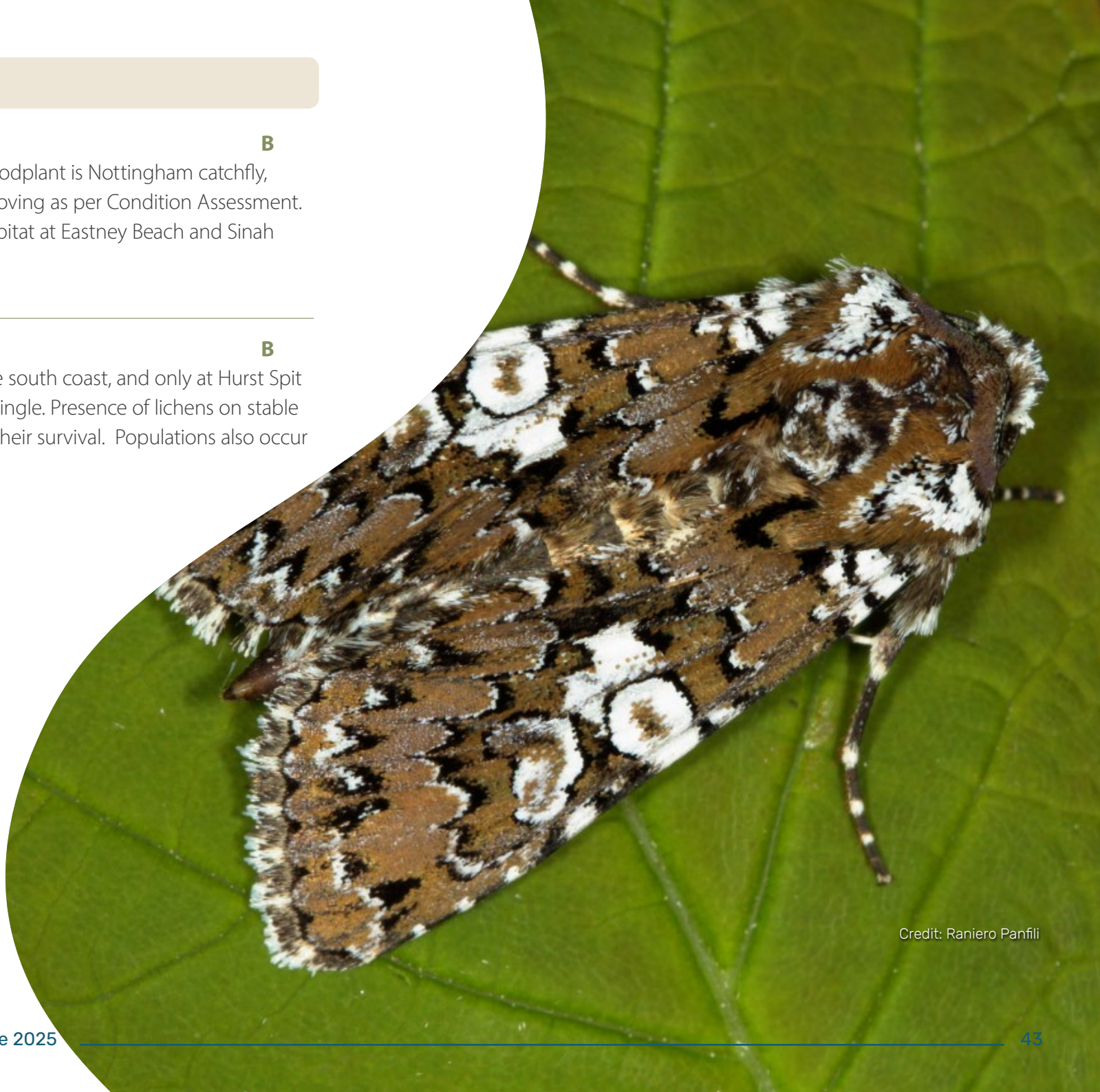
Hadena albimacula **White spot** **B**

Only found at Browndown SSSI. The larval foodplant is Nottingham catchfly, which is doing OK, but holm oaks need removing as per Condition Assessment. Nottingham catchfly also found in similar habitat at Eastney Beach and Sinah Common. Survey for White Spot?

White spot moth - Hantsmoths

Setina irrorella **Dew Moth** **B**

A mainly coastal species, occurring along the south coast, and only at Hurst Spit (SSSI) in Hampshire, feeding on lichens on shingle. Presence of lichens on stable rocks and shingle is therefore important for their survival. Populations also occur on cliff tops on the Isle of Wight.



Credit: Raniero Panfili

Measures
Protect habitat from sea defences and allow natural erosion processes to continue, creating space for cliff retreat and providing foraging habitat. Bare ground is a vital habitat for many species, including burrowing bees and wasps, ground beetles, and wildflowers. Coastal defences or cliff protection schemes can alter or destroy the habitat.
Managing Soft Cliffs for Invertebrates - Summary Report - May 2007

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Beetles

Cathormiocerus myrmecophilus **Lizard weevil** **B**
Cliff top maritime grassland - likes buck's-horn plantain. Recorded at Brownwich, Milford on Sea, and Gilkicker Point.

Bees, wasps and ants

Eucera longicornis **Long-horned bee** **B**
Requires legume-rich wildflower areas. Female long-horned bees dig burrows in bare or sparsely-vegetated ground, typically on south-facing slopes found on eroding soft cliffs.
Long-horned bee - species management sheet - Buglife

Butterflies

Melitaea cinxia **Glanville fritillary** **B**
Found mainly on the south coast of the Isle of Wight, with the occasional colony, typically short-lived, appearing on the South Hampshire coast at Hurst Spit and Hordle Cliffs. Requires grasslands on sheltered south facing eroding cliffs and nearby open habitat - thrift and trefoils for nectar and ribwort plantain being the larval foodplant. Could increase in range naturally as a result of climate change, so not something that can necessarily be influenced by management.
Glanville fritillary - Butterfly Conservation

Liverworts and mosses

Tortula wilsonii **Wilson's pottia** **B/D**
A rare, declining species listed as Endangered. It is a species of bare, neutral or acidic soil in coastal areas, occurring in habitats such as soft cliffs. One record 1974 on the coast at Pylewell, the other at Gosport (2020) - which requires targeted management of regular cutting back of scrub and management to create bare ground. Raise awareness with the landowner.
Tortula wilsonii - British Bryological Society

Priority species assemblage dry heaths with sand and gravel exposures

Measures – Refer to measures H1, H2 and H3
Manage grazed heath (or where grazing is not practical, other forms of structural management) allowing for bare sandy areas, areas of sparse, short vegetation and structural diversity. Consider restoring felled woodland to heathland. Monitor populations.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Bees, wasps and ants

Diodontus insidiosus N/A B
New Forest and east/north-east Hampshire.
Diodontus insidiosus | BWARS

Halictus confusus Southern bronze furrow Bee B
New Forest and east/north-east Hampshire - not seen for some time.
Halictus confusus | BWARS

Temnothorax interruptus Long-spined ant B
Temnothorax interruptus | BWARS

Beetles

Cicindela sylvatica Wood (heath) tiger beetle B
Wood (heath) tiger beetle - species management sheet - Buglife

Butterflies

Hipparchia semele Grayling B
Grayling - Butterfly Conservation

Flies

Thyridanthrax fenestratus Mottled bee-fly B
New Forest and east/north-east Hampshire. **Mottled bee-fly - NBN Atlas**

Ferns

Botrychium lunaria Moonwort B
Rare/near extinct in Hampshire. Found in low grass-heath associated with roadsides, disused runways and spoil heaps. Maintain known sites, grazing to maintain open habitat, low soil fertility. Expand habitat.

Reptiles

Lacerta agilis Sand lizard B
Mainly confined to the New Forest and Ringwood Forest, and Woolmer Forest and Broxhead Common in the north east. **Sand lizard - Amphibian and Reptile Conservation Trust**

Measures – Refer to measures H1, H2 and H3
Requires grazing on wet and dry heath whilst maintaining structural diversity (or where grazing is not practical, other forms of structural management). Grazing levels should be appropriate to the site's hydrological conditions. Restore management to sites, especially small sites and seek to expand habitat to improve connectivity.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Reptiles

Coronella austriaca **Smooth snake** **B**

Mainly confined to the New Forest and Ringwood Forest, and Woolmer Forest. Dependent on managed heathland, where it is mainly found in mature vegetation that provides good cover. **Smooth snake | Amphibian and Reptile Conservation Trust**

Butterflies

Plebejus argus **Silver-studded blue** **B**

Although common on New Forest heaths and parts of east/north-east Hampshire, lots of small sites have been lost. Hampshire has nationally important populations. Better management of heathland needed. This species is a warmth-loving butterfly and, as such, is often found in sheltered areas, or those that are south-facing. **UK Butterflies - Silver-studded Blue - Plebejus argus**

Fungi

Poronia punctata **Nail fungus** **B**

Although common in the New Forest, it also occurs at Eelmoor Marsh SSSI and Castle Bottom NNR in north-east Hampshire. It is a Hampshire Responsibility species with 39 Hampshire records out of 103 UK records, and is a very specialized species, only being found on the dung of horses and ponies that have been feeding on unimproved acidic grassland and heath vegetation. Important no fertiliser or pesticides are applied. Survey and monitor.

Lichens

Cladonia phyllophora **N/A** **B**

New Forest, but also Woolmer Forest SSSI and Broxhead and Kingsley Commons SSSI.

Cladonia rei **N/A** **A/B**

Recently found outside of the New Forest on high quality acid heaths, where it can occasionally be abundant. Expand heathland nr populations

Priority species assemblage - ephemeral and shallow ponds which also occur outside the New Forest SSSI

Measures – refer to measure P2
For these species it is important to maintain small, shallow ponds, and temporary pools, and avoid drainage, unnecessary clearance, infilling, and deepening. Prevent pollution and eutrophication by avoiding fertiliser use near ponds, or in areas that might drain into a pond. Management should be on a rotational basis, with any essential dredging limited to less than 50% of the pond in any two-year period. Cattle stocking densities need to be carefully balanced to prevent water bodies becoming overgrown or excessively poached and eutrophic from overstocking. Seek to establish more temporary ponds in the immediate vicinity in order to disperse and expand population.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Beetles

Berosus luridus **N/A** **B/E**
Inhabits lowland ponds and slow drains on heathland like New Forest and Woolmer, both SSSIs. Maintain open nature of the ponds and discourage dogs and livestock from entering ponds as flea and tick treatment plus turbidity will kill them. These are old records, so more survey required to determine presence.

Pelenomus olssoni **N/A** **B/E**
Mainly found in ephemeral ponds in north-east Hampshire with some old records from the New Forest. Very little known about them. Maintain and expand habitat and more survey needed.

Crustacea

Chirocephalus diaphanus **Fairy shrimp** **B**
More recent records in Long Valley in north-east Hampshire and currently thought to be present in around 28 ponds in the New Forest. Important that the pond dries out each year as drying out and re-wetting triggers the hatching of eggs on the pond substrate, and that there is sufficient food supply when the pond fills - such as algae. Grazing livestock poaching the pond margins is also essential, especially as dung provides nutrients. **Fairy shrimp - species profile - Freshwater Habitats Trust**

Flowering plants

Cyperus fuscus **Brown galingale** **D**
A Schedule 8 species mostly within two SSSIs. Requires open, shallow margins of seasonal pools and areas of winter wet poached ground maintained by grazing animals. Cessation of grazing, encroachment by scrub and lowering of the water-table have led to its decline. Requires heavy grazing to reduce the cover of other plants. A Freshwater Habitats Trust project is creating new ponds nearby to encourage expansion.
Brown galingale - species dossier - Freshwater Habitats Trust

Priority species assemblage - grazed chalk grassland with structural diversity including managed scrub and bare ground

Measures – refer to measures G2(LCG) and G3(LCG)
Requires lightly grazed chalk grassland to maintain structural diversity with areas of short and long grass, patches of scrub, anthills, and some bare ground. Maintain and restore existing sites and expand habitat to improve connectivity. Survey and monitor.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Flowering plants

Arabis hirsuta **Hairy rock-cress** **B**
Threatened but not uncommon on the chalk in Hampshire.

Clinopodium acinos **Basil thyme** **B**
S41. Indicator of NVC CG7. A pioneer species

Coeloglossum viride **Frog orchid** **B**
S41. Declining due to habitat loss and drought, thought to be retreating northwards **Dactylorhiza viridis (L.) R.M.Bateman, Pridgeon & M.W.Chase in BSBI Online Plant Atlas 2020**

Gentianella anglica **Early gentian** **B**
Schedule 8 and S41.

Herminium monorchis **Musk orchid** **B**
S41 and endangered. Hampshire has important populations but not many sites.

Lathyrus aphaca **Yellow vetchling** **B**
Vulnerable and declining.

Neotinea ustulata **Burnt orchid** **B**
S41. Rare and vulnerable.

Platanthera bifolia **Lesser butterfly-orchid** **B**
S41 and endangered.

Tephroseris integrifolia **Field fleawort** **B**
Vulnerable. Rare on the chalk. Might be one for bespoke action. Possibly on its way out in Hampshire

Flies

Ogcodes gibbosus **Smart-banded hunchback** **B/E**
Recorded on St Catherine's Hill, Old Winchester Hill, Beacon Hill, and Oxenbourne Down - all SSSIs. Requires a mosaic of downland with scattered scrub, would benefit from general expansion in habitat and connectivity.
More survey required. Also found on heath within the New Forest SSSI

Bees, wasps and ants

Andrena hattorfiana **Large scabious mining bee** **B**

Nationally rare. More frequent Salisbury Plain. Will benefit from expansion chalk grassland, requires field scabious.

Andrena simillima **Buff-banded mining bee** **B**

Vulnerable.

Bombus humilis **Brown-banded carder bee** **B**

S41

Bombus muscorum **Moss carder bee** **B**

S41

Bombus ruderarius **Red-shanked carder bee** **B**

S41

Bombus ruderatus **Large garden bumblebee** **B**

S41

Nomada argentata **Silver-sided nomad bee** **D**

Nationally rare. Requires Andrena marginata (small scabious mining bee) as it's a cleptoparasite. Only found at Bokerley Ditch, Martin Down.

Nomada armata **Armed nomad bee** **B**

S41

Beetles

Cryptocephalus sexpunctatus **Six-spotted pot beetle** **B**

Only known site is at Stockbridge Down SSSI. Adults feed on leaves of trees. Maintain grassland management with structural diversity including scrub hawthorn and hazel. Raise awareness with landowner. **Spotting Pot Beetles - Buglife projects**

Butterflies

Cupido minimus **Small blue** **B**

S41

Erynnis tages **Dingy skipper** **B**

S41

Hesperia comma **Silver-spotted skipper** **B**

Threatened.

Polyommatus bellargus **Adonis blue** **B**

Threatened. Although some Hampshire sites have recently re-colonised, its future is far from secure as most sites are isolated. Needs improved connectivity.

Polyommatus coridon **Chalk hill blue** **B**

Threatened. Has declined massively in southern England (including Hampshire) over the last 20 years. Sites in conservation management still have reasonable populations, but many small sites lost.

Pyrgus malvae **Grizzled skipper** **B**

S41. Managing for pearl-bordered fritillary will also improve habitat for grizzled skipper. Has declined massively in southern England (including Hampshire) over the last 20 years. Sites in conservation management still have reasonable populations, but many small sites lost.

Moths

Hemaris tityus **Narrow-bordered bee hawk-moth** **B**

S41. Scattered downland at Martin Down and Bentley. On the increase, a beneficiary of well managed calcareous grassland and climate warming.

Scotopteryx bipunctaria and S.bipunctaria creta **Chalk carpet** **B**

S41. Declining and important. It survives only in one location on Broughton Down, with occasional wanderers elsewhere. Larva feeds on Comon bird's-foot-trefoil, hare's-foot clover, white clover, red clover, and vetch. Requires very chalky turf and some bare ground.

Chalk carpet - Butterfly Conservation

Trichopteryx polycommata **Barred tooth-striped** **B**

S41. Barred tooth-striped moth requires wild privet bushes of a range of age groups, so grazing levels should be light enough to allow some regeneration of wild privet especially in sunny locations where it is also a valuable nectar source for many insects. Population centred around western chalk; recorded at Broughton Down, Martin Down, Harewood Forest, and Leckford.

Barred tooth-striped - fact sheet - Butterfly Conservation

Liverworts and mosses

Abietinella abietina var. abietina & hystricosa **Fir tamarisk-moss** **B**

Good indicator of CG7 chalk grassland. Scattered across central chalk SSSIs and SINCs.

Entodon concinnus **Montagne's cylinder-moss** **B**

Good indicator of CG7 chalk grassland.

Rhodobryum roseum **Rose-moss** **B**

Good habitat indicator. Fairly local in Great Britain as a whole and has especially declined in central and eastern England.

Weissia condensa **Curly beardless-moss** **B**

S41. Nationally rare and Hampshire possibly has best populations.

Weissia condensa - Atlas of British and Irish Bryophytes

Weissia sterilis **Sterile beardless-moss** **B**

S41 Nationally rare. **Weissia-sterilis.pdf**

Priority species assemblage – grazed or mown trefoil/clover communities

Measures – refer to measures G1(LMW/LAG), G2(LMW/LAG) and G4
Maintain short grazed or mown turf with some disturbance to maintain open areas. Remove scrub.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Flowering plants

Filago vulgaris	**Common cudweed**	**B**
Threatened.		
Lotus angustissimus	**Slender bird's-foot-trefoil**	**B**
Threatened and Hampshire stronghold.		
Lotus subbiflorus	**Hairy bird's-foot-trefoil**	**B**
Hampshire stronghold.		
Moenchia erecta	**Upright chickweed**	**B**
Hampshire stronghold.		
Trifolium glomeratum	**Clustered clover**	**B**
Hampshire stronghold.		

Credit: Botanical Society of Britain and Ireland

Measures – refer to measures G1 and G2 for a variety of grassland types
Maintenance of existing habitat inside and peripheral to protected sites. Traditional land management that created the necessary habitat for this species should be maintained and taken up at adjacent and nearby sites to expand habitat. This includes short-sward grazing or cutting and removing cut material, and no fertilisation, herbicides or ploughing. Raise awareness with landowner/manager. Such sites often occur in old cemeteries. Survey and monitor. Waxcaps and Grassland Fungi - A guide to identification and management - Plantlife

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Fungi

Entoloma bloxamii s. lat. **Big blue pinkgill** **B**
Recent records New Forest and Eelmoor Marsh.

Geoglossum atropurpureum **Dark-purple earthtongue** **B**
Three Hampshire records and 108 UK records - New Forest and Highclere Park.

Hygrocybe calyptriformis **Pink waxcap** **B**
Indicator of high-quality grassland. Widespread in UK. Seven Hampshire records and 1292 UK records. New Forest and grasslands in the Romsey and Eastleigh area – cemeteries.

Microglossum olivaceum **Olive earthtongue** **B**
Indicative of high-quality grassland. Six Hampshire records and 296 UK records. Linwood New Forest, Highclere, Exbury and Noar Hill.

Measures – refer to measure W2, W3, W7, HD1 and HD2
Specific management is required to create structural diversity and increase light levels in woodland, such as active coppicing, creating glades, and opening up rides. This will create more food sources for the species listed below. New woodland and hedgerow planting, and well managed hedgerows would improve connectivity and encourage expansion of their range. Any coppicing or other such work should be carried out between November and March to avoid disturbing species such as nesting dormice and birds.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Butterflies

Boloria euphrosyne **Pearl-bordered fritillary** **B**

Requires deciduous woodland containing open areas, such as woodland clearings, rides and coppice cut on rotation that provide the right conditions, foodplants (violets) and nectar sources for this species to thrive. Connect open areas within and between woodlands. **Pearl-bordered Fritillary | Butterfly Conservation**

Moths

Minoa murinata **Drab looper** **B**

In Hampshire this species is extremely local in mature deciduous woods, flying by day in open, sunlit glades where the foodplant wood spurge flourishes. Remaining strongholds are now Pamber Forest and Harewood Forest in the north of the county, and Bentley Woods and Crab Wood/West Wood in the south. Widening rides and implementing coppicing will improve conditions for wood spurge. Felling/extraction of conifers in PAWs ideal for foodplant, providing sunny, sheltered areas with disturbed ground.
Woodland Wildlife Toolkit

Mammals

Muscardinus avellanarius **Hazel dormouse** **B**

Specific management is required to create structural diversity and increase light levels in woodland, such as active coppicing, creating glades and opening up rides. This will create more food sources for dormice. Dormice also inhabit well managed hedgerows which should be cut on a three-year cycle, alternating sides. **Managing small woodlands for dormice**

Beetles

Trachys minutus **N/A** **B/E**

Known from a few sites scattered across Hampshire. Last record in 2005 at Stockbridge Down, although thought to prefer old deciduous woodlands especially where coppicing has been practiced. Needs survey and better evidence of requirements.

Measures – refer to measures W2 and W3
Requires light shade in coppiced woodland, open glades and rides, woodland edges and hedges, or more shaded conditions under beech with no competing vegetation. These species are intolerant of grazing.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Flowering plants

Cephalanthera damasonium **White helleborine** **B**

S41 species, becoming more common on the chalk in Hampshire. Requires shady bare ground, commonly under beech but can now be found in quite open conditions. Colonises new beech plantations so plant young beech trees near existing populations. **Woodland Wildlife Toolkit**

Cephalanthera longifolia **Narrow-leaved helleborine** **B**

S41. Hampshire has significant proportion of UK population. Requires permanent patches of light in woodland (i.e. glades rather than coppice). On calcareous soils. **Woodland Wildlife Toolkit**

Epipactis phyllanthes **Green-flowered helleborine** **B**

Has a broad ecological tolerance, from deep shade to full sun in soils that range from mildly acidic to strongly alkaline and from exceptionally dry and humus-poor to ever-wet and humic. Arguably most typical of sparsely vegetated, shaded woodland. Its habitats include **Fagus sylvatica** woods among ivy on chalk, flinty clays or sandstones, Pinus and Betula scrub, **Corylus avellana** coppice, shaded roadside verges, riverside and lakeside willow-carr. However, the wet woodland populations (Itchen Valley from Alresford to Eastleigh) seem in freefall, possibly due to habitat loss. An RVEI in East Hampshire is being managed for this species.

Epipactis purpurata **Violet helleborine** **B**

Hampshire has major UK populations. Some RVEIs are being managed for it. It is most characteristic of densely shaded fagus sylvatica woods, particularly those on 'clay-with-flints' deposits, but is also frequent in neutral to mildly acidic, usually clay-rich soils that support mixed woodland and coppices of corylus avellana and carpinus betulus. Deep shade is typical but not essential, hence appearing on shady road verges

Melittis melissophyllum **Bastard balm** **B**

S41 species. Not common and vulnerable - (Sherfield English site now restricted to road verge but formerly in adjacent woodland). In woodland it requires thinning, rides and glades to let in light, coppicing to retain humidity, and protection from disturbance. Connectivity with hedges and other woodland is important. **Woodland Wildlife Toolkit**

Neottia nidus-avis **Bird's-nest orchid** **B**

Vulnerable. Prefers deep humus of densely shaded beech woods on chalky soils. Avoid soil compaction and waterlogging to retain important mycorrhizal fungi. **Woodland Wildlife Toolkit**

Priority species assemblage – lichens and fungi associated with mature and veteran trees in open Parkland

Measures – refer to measures PP2, G2, G3, and W9
Need to maintain open well-lit conditions around mature and veteran native trees in locations that support these species by thinning regeneration (whilst being mindful of the need to retain some younger trees) and controlling invasive species such as ivy, holly and rhododendron. Remove or reduce sources of locally generated atmospheric pollutants e.g. by specifying livestock stocking levels and by limiting fertilising of grasslands. If possible, convert arable land adjacent to veteran trees to pasture. Create new pollards out of younger trees and maintain them by periodic recutting. Necessary tree surgery of veteran trees may be needed to improve the stability of the tree and prolong its life without damaging the lichen. Monitor the habitat and species to ensure that the landowner is aware of the presence of these species. Woodland Wildlife Toolkit

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Fungi

Boletus rhodopurpureus **Oldrose bolete** **B**

The oldrose bolete is very rare in the UK (Endangered), typically favouring old open woodland or parkland with plenty of sunlight on neutral soils, reported mainly from the south of England such as parts of the New Forest and Windsor Great Park. More recently found in the Hampshire part of Porton Down. 33 Hampshire/57 UK records.

Podoscypha multizonata **Zoned rosette** **B**

Uncommon. 27 Hampshire records out of 128 UK records. Mainly in the New Forest but recent records from IBM Hursley Park and older records at Bramshill Police College. Expansion and connection of habitat at known population sites. New oakwoods need to be grown in areas with long-term protection so that they may eventually reach veteran or ancient growth stages. Survey and monitor.

Lichens

Anaptychia ciliaris **Eagle's claws** **B**

Seriously declining lichen found on veteran trees in parkland and old pasture across central Hampshire, not seen since 2005. Declined due to Dutch elm disease, SO2 pollution and the use of inorganic fertilisers. Now found on ash and maples, and so threatened by ash dieback. Measures include planting of host trees in open-grown situations. Supporting of potential host trees to achieve veteran status. Re-establishment of elm populations. Buffering suitable sites from SO2 pollution sources, such as through dense tree and shrub planting. Reduction of inorganic fertiliser use in vicinity of known and potential sites.
Eagle's claw - Back from the Brink

Bellicidia incompta **Sap-groove lichen** **B**

Seriously declining field tree lichen but also with strong New Forest population. Same reasons for decline as for eagle's claws. Found on the bark or lignum of mainly veteran trees, but also sometimes slow growing suppressed younger trees. Old Elm trees were its primary recorded habitat previously. Now mainly found on the bark or lignum of wounded Beech, Horse Chestnut, Ash, Holly, Sycamore, Maple and Hornbeam. Found in both old growth pasture woodlands, parkland and on field and wayside trees. Actions include supporting host trees to achieve veteran status. Re-establishment of elm populations. Planting of new host trees in open-grown situations. Buffering suitable sites from ammonia pollution sources, such as through dense tree and shrub planting. Maintaining/ creating open conditions in suitable woodlands. Retaining damaged trees where safe to do so. **Sap-groove lichen - Back from the Brink**

Caloplaca lucifuga **N/A** **B**

Occurs only at Hurstbourne Park in Hampshire. Support open-grown oaks to achieve veteran status. Maintain open conditions. Reduction of fertiliser use in vicinity of known and potential sites.

Caloplaca virescens **N/A** **B**

Elm specialist of field trees, now very rare and on ash. Only four locations in Hampshire, two within registered parks at Hackwood and Armsworth. Very old records. Support open-grown trees to achieve veteran status. Survey to see if still present.

Lecanora quercicola **Oak rim lichen** **B/E**

Veteran tree species of woodland edges, rare in New Forest. Records from outside the New Forest SSSI not seen recently but parkland habitats not recently surveyed. Requires old oak trees with base-rich bark and well-lit trunks that are slightly damp - sheltered ancient parkland and wood pasture in southern Britain. Three locations: Hurstbourne Park, Cranbury Park, and New Forest. Support open-grown oak trees to reach veteran status and maintain open conditions. No recent records, requires survey. **Oak rim lichen - Back from the Brink**

Lecanora sublivescens **Lemon tart lichen** **B/E**

Veteran tree species of woodland edges, rare in New Forest, occurs outside of the New Forest. Support open-grown oak trees to reach veteran status and maintain open conditions. Four locations: Hurstbourne Park, Bramshill Park, Hackwood Park and New Forest. No recent records, requires survey. **Lemon tart lichen - Back from the Brink**

Zwackhia prosodea **N/A** **B/E**

Veteran oak species, rare in the New Forest, a few old records scattered across Hampshire including Hurstbourne Park and Brockenhust Park. Old woodland and parkland species found on dry, shaded bark of mature and old yew and oak. Management to maintain light levels and open conditions. Supporting potential host trees to reach veteran status. Expanding suitable habitat. Needs new surveys to establish whether still present.

Chaenotheca chlorella **N/A** **B/E**

Very rare in UK, veteran oak species (FC suggests lime?). Only one site Hampshire - Waggoners Wells, part of Bramshott and Ludshott Commons SSSI. Optimum conditions on old oaks inside forests. Survey to re-establish presence and safeguard. Maintain oak succession and closed conditions.

Chaenotheca chlorella | The British Lichen Society

Lecania chlorotiza **N/A** **B/E**

Rare woodland species found on very shaded, base-rich bark and inside old hollow trees, especially elm, ash, and willow. Only one site in Hampshire: Waggoners Wells. Survey to re-establish presence and safeguard. Support host trees to reach veteran status and maintain oak succession and closed conditions

Lecania chlorotiza | The British Lichen Society

Priority species assemblage fungi and other species associated with deciduous woodland and wood pasture in and outside the New Forest SSSI

Measures – Refer to measures W2, W3 and W9
Maintain woodland cover, reverse habitat fragmentation, and expand existing habitat. Prioritise expansion and connection at known sites. Wood-banks and other earthworks should be retained and protected from damage. Large woody debris from fallen or damaged trees should not be removed. Retain a conifer element in areas of restored Planted Ancient Woodland (PAWs). Sweet chestnut coppice with known toothed fungi communities should be retained and if possible managed along with traditional methods of cutting on a 10–12-year rotation. Invasive rhododendron can damage toothed fungi habitat and should be controlled or eliminated. Reduce levels of atmospheric nitrogen deposition. Raise awareness with landowners and land managers, and avoid tree felling at known locations. Survey and monitor.
Woodland Wildlife Toolkit

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Beetles

Ampedus rufipennis **Red-horned cardinal click beetle** **B**
New Forest and Harewood Forest, but not seen since 2005. The larvae develop in relatively soft white-rotten heartwood of beech, ash, elm, birch, apple, and plum. Maintain old-growth trees in open conditions with sensitive grazing to moderate shrub encroachment. Create new pollards out of younger trees to encourage successive generations of suitable trees to age naturally. Avoid tidying away pieces of fallen decaying wood or removing old standing dead trees. Search for new sites and continue to monitor existing sites.
Red-horned cardinal click beetle - Back from the Brink

Fungi

Craterellus melanoxeros **Blackening chanterelle** **B**
6 Hampshire/22 UK records. Thought to be New Forest only but recently found in Spearywell Woods 2023.

Hydnellum s cabrosum **Bitter tooth** **B**
Three Hampshire records and 26 UK records. Associated with oak and chestnut, mostly found on well-drained banks. All old records from New Forest and northeast Hampshire (Hawley Lake).

Hydnellum spongiosipes **Velvet tooth** **B**
27 Hampshire/92 UK records. Thought to a mainly New Forest species but recently found in Newtown Common, North Hampshire.

Porphyrellus porphyrosporus **Dusky bolete** **B**
Two Hampshire records and 72 UK records. Ashford Hill and Preston Oak Hills.

Aureoboletus gentilis **Gilded bolete** **B**

32 Hampshire records and 84 UK records. Most are found in the New Forest and Bentley Wood but there are records from the rest of the county.

Boletus fechtneri **Pale bolete** **B**

Six Hampshire records and 20 UK records. New Forest and near Winchester.

Boletus legaliae **Bilious bolete** **B**

10 Hampshire records and 61 UK records. Specialist habitats in New Forest plus Hursley Park.

Boletus moravicus **Tawny bolete** **B**

Eight Hampshire records and 40 UK records. Mainly New Forest, and also near Winchester.

Boletus satanas **Devil's bolete** **B**

Uncommon and mainly found in chalky woodland in central Hampshire. Hampshire has 15 out of 95 UK records. Reversing habitat fragmentation and expansion of existing habitat is key. Raising awareness with landowners. Survey and monitor.

Buchwaldoboletus lignicola **Wood bolete** **B**

Four Hampshire records out of 72 UK records - mainly New Forest and north-east Hampshire. Requires old growth pine forest and retention of old stumps. Protection of known localities. **Buchwaldoboletus lignicola - Fungal Red List**

Buglossoporus (Piptoporus) quercinus **Oak polypore** **D**

19 Hampshire records out of 146 UK records, in the New Forest and Andover areas. Has very specific habitat requirements. Advice should be given to not harvest or otherwise remove large woody debris from fallen or damaged oaks at sites where this species is present (or at any nearby sites). Survey and monitor.

Hericium coralloides **Coral tooth** **B**

Saprophytic fungi on beech. Retain living or dead trunks of standing or fallen beech. 28 Hampshire records and 70 UK records, mainly New Forest and near Selborne. **Coral tooth fungus - Back from the Brink**

Hericium erinaceus **Bearded tooth** **B**

Saprophytic fungi on beech. Retain living or dead trunks of standing or fallen beech. 53 Hampshire records and 125 UK records. New Forest stronghold and scattered records across central Hampshire. **Bearded tooth fungus - Back from the Brink**

Mycena renati **Beautiful bonnet** **B**

Saprophytic fungi on beech. Retain decaying wood of deciduous trees. One record Noar Hill 2021. **Mycena renati - My Specie Info**

Sarcosphaera coronaria **Violet crowncup** **B**

Seven Hampshire records out of 31 UK records. Seen at Leckford Golf Course in 2022. Prefers calcareous soils under coniferous or broadleaf woodland so look to expand woodland habitat near existing populations. Raise awareness with landowner/manager. Survey and monitor.

Strobilomyces strobilaceus **Old man of the woods** **B**

Four records between Alton and Petersfield. A rare species found in chalky beechwoods. Reversing habitat fragmentation and expansion of existing habitat would support this species. Raise awareness with landowner/manager. Survey and monitor.

Measures – Refers to measure W2
Maintain habitat and hydrology, and expand/reconnect where possible.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources

Flies

Lipsothrix nervosa **Southern yellow splinter** **B**

Very few records scattered across Hampshire. Requires shady, wet woodland adjacent to streams. Associated with damp, decaying wood. Retain dying, mature trees and all deadwood in wet woodlands to ensure continuity of deadwood supply. Where woodlands recently dried out or in process of drying out, block ditches/culverts to raise water tables. Allow woody debris to accumulate in springs, streams, ditches and other watercourses
More survey required. **Southern yellow splinter - London Biodiversity Action Plan**

Tabanus miki **Plain-eyed brown horsefly** **B**

Can be found in boggy clearings in woodland. Not seen in the New Forest since 1988. More recent records in Botley Wood, Wickam Common, and West Walk. More survey required. Maintain open areas.

Credit: Steven Falk

Measures - Refer to measures W1, W2, R1, G2, G3, P1, P2, P4, FR1, HD1, and HD2
Protect all existing confirmed roost sites and retain as many potential roost sites as practicably possible. Ensure a succession or continuity of potential roost sites for the future and create a good network of habitats used for roosting, feeding and commuting. Avoid isolating any areas currently used for feeding. Ensure good connectivity between sites. Reduced pesticide use within foraging areas will improve insect diversity.
Woodland specialists - Bats and woodland - Bat Conservation Trust

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources

Mammals

Barbastella barbastellus **Western barbastelle** **A/B**

A flagship Hampshire species, barbastelles are crevice-dwelling bats. They predominantly roost in trees associated with woodland that has a high proportion of standing dead or dying trees, as these provide the cracks and crevices they prefer to use as roosts. Also, trees with ivy. Barbastelles require moth-rich foraging habitats over a 7km range, so an increase in the quality and availability of wetland and riparian habitat, species-rich meadow, and hedgerows is important. The Mottisfont Bats Special Area of Conservation Foraging Zone is covered by planning policies to avoid direct or indirect impacts on suitable roosting, foraging and commuting habitats. Other important populations occur at Havant Thicket and across the New Forest and Forest fringes. They require mixed woodland structure and access to habitat-rich countryside and rivers.
Barbastelle - Back from the Brink

Myotis bechsteinii **Bechstein's bat** **A/B**

Flagship Hampshire woodland species, which favours mature dense woodland. Major hotspot at Havant Thicket. Scattered records elsewhere. Bechstein's bat is a woodland species similar to barbastelle, favouring holes and crevices in trees in deciduous woodland to roost in. However, foraging range is less at 2km and is mainly confined to woodland habitat. Surrounding landscape restoration is important for boosting insect numbers.
Bechstein's bat - UK Bats - Bat Conservation Trust.

Measures – Refer to measures R1, G2, G3, P1, P2, P4, FR1, HD1, and HD2
Require landscape scale habitat restoration, a reduction in pesticide use to boost insect numbers, and protection of roost sites
Bats and agriculture - Landscapes for Bats - Bat Conservation Trust

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources

Mammals

Eptesicus serotinus **Serotine** **A/D**
Mainly roosts in older buildings. Declining due to loss of large insects and impacts to buildings. As the serotine roosts almost entirely in buildings, householders need to be aware and avoid building work and use of toxic chemicals in remedial timber treatment that may impact on them.
Serotine - UK Bats - Bat Conservation Trust

Pipistrellus nathusii **Nathusius' pipistrelle** **A/B/C**
The majority of roosts are located close to large freshwater lakes, and this species also forages near rivers, canals, lakes and waterlogged areas, as well as in woodland rides and edges. Requires improvements in water quality and retention of old trees with hollows.
Nathusius' pipistrelle - UK Bats - Bat Conservation Trust

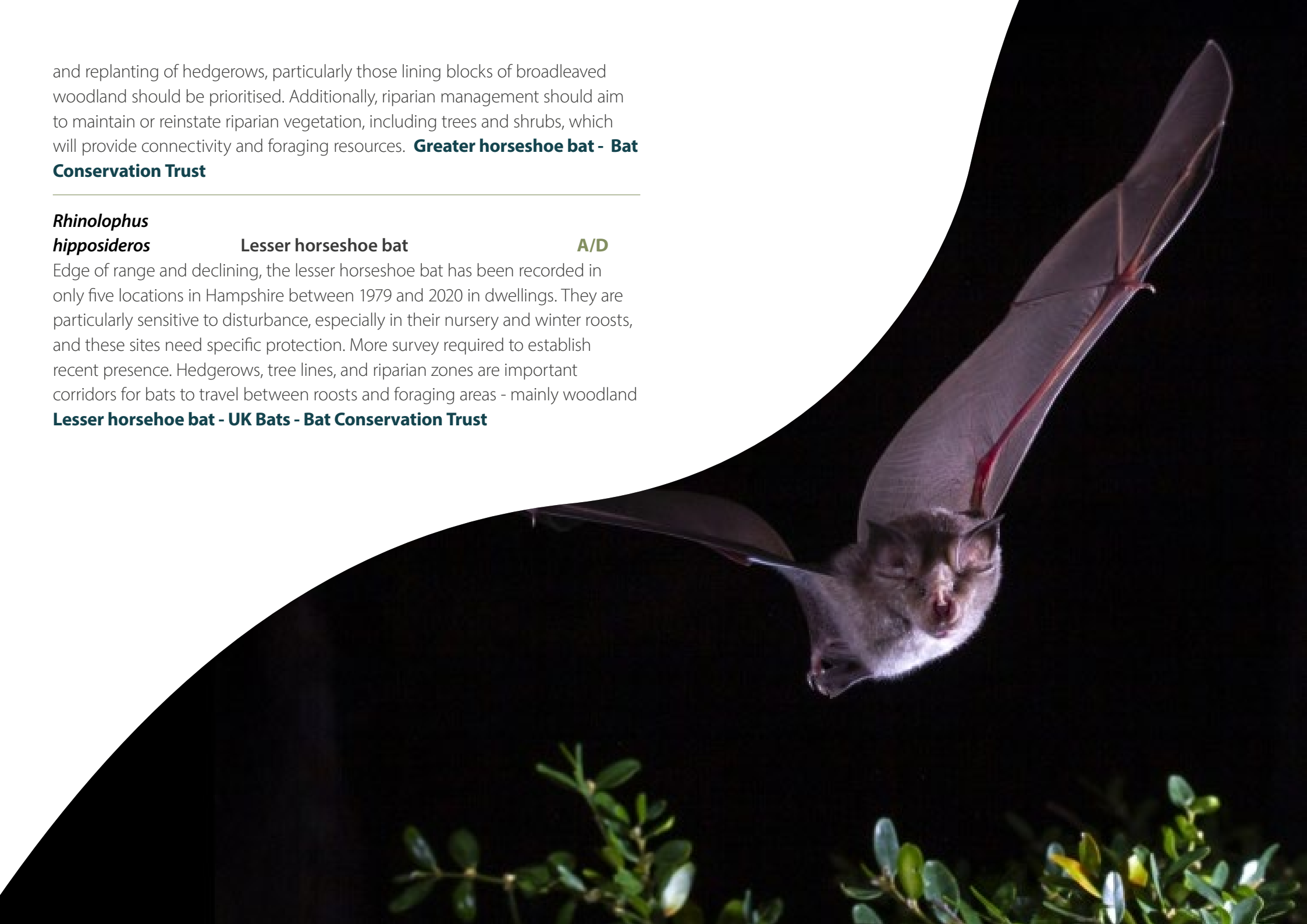
Plecotus austriacus **Grey long-eared bat** **A/D**
Decline is related to the loss of suitable maternity roosts (large, open roof spaces) and a loss of their foraging habitat and connectivity (lowland unimproved grassland, marsh and riparian habitats, and hedgerows). Requires landscape scale habitat restoration particularly in the areas around the few records that exist, predominantly on the southern fringes of the New Forest.
Grey long-reared bats - Back from the Brink
Conserving long-eared bats in our landscape - Bat Conservation Trust

Rhinolophus ferrumequinum **Greater horseshoe bat** **A/D**
Scattered records across Hampshire. Recent radio-tracking work from one of the two previously known key roost sites just north of Ringwood in the Avon Valley, has identified numerous new day and night roosts. These are predominantly in the Avon Valley north of Ringwood which appears to be an important area for this species (Peak count in known roost in April 2025 was 38). A key finding of the study was the linking of the population using the Avon Valley hibernation roosts to maternity/hibernation roost sites in Dorset, notably Bryanston Grange, an SSSI designated for its greater horseshoe maternity roost (~30km west). Measures should include robust survey effort (including April surveys for transitional roosts in Avon Valley) seeking to safeguard known roost sites, including minor roosts, and ensuring robust and comprehensive mitigation and monitoring where development impacts are unavoidable. Further measures include the proactive provision of suitable roosting structures where this is permissible, and further targeted survey work building upon the work undertaken to date, identifying key routes through the landscape, better defining the core sustenance zone and maintaining and creating ecologically functioning dark corridors. Working with landowners in core sustenance zone (3km and beyond where evidence supports this) to reduce the use of parasitic wormers in livestock and restoration

and replanting of hedgerows, particularly those lining blocks of broadleaved woodland should be prioritised. Additionally, riparian management should aim to maintain or reinstate riparian vegetation, including trees and shrubs, which will provide connectivity and foraging resources. **Greater horseshoe bat - Bat Conservation Trust**

Rhinolophus hipposideros **Lesser horseshoe bat** **A/D**

Edge of range and declining, the lesser horseshoe bat has been recorded in only five locations in Hampshire between 1979 and 2020 in dwellings. They are particularly sensitive to disturbance, especially in their nursery and winter roosts, and these sites need specific protection. More survey required to establish recent presence. Hedgerows, tree lines, and riparian zones are important corridors for bats to travel between roosts and foraging areas - mainly woodland **Lesser horsehoe bat - UK Bats - Bat Conservation Trust**



Priority species assemblage - aspen

Measures – Refer to measures W2 and R1
The adult species seem to prefer damp woodlands and riverside margins. Lavae feed on species that feed on aspen. Needs aspen cut on rotation

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources

Bees, wasps and ants

Symmorphus connexus **N/A** **B**

Nationally rare. Nests are stocked with the larvae of the leaf beetle Zeugophora subspinosa which mainly feeds on aspen.

Symmorphus crassicornis **N/A** **B**

Nationally rare. Nests are stocked with the larvae of the poplar leaf beetle Chrysomela populi which mainly feeds on aspen.

Credit: Stefan

Table 3.5: Species assemblages – New Forest SSSI only

The following species are located solely within the New Forest SSSI. It is, therefore, the statutory responsibility of landowner(s) to manage the habitats that provide the conditions for these species. However, this table has been included in the LNRS for awareness, as these are priority species and are threatened.

Priority species assemblage: New Forest bogs, mires, wet heath, lawns, and ponds

Measures: New Forest SSSI Site Management Plan - Views About Management (naturalengland.org.uk)

For these species, management should aim to maintain the groundwater quality and quantity, though the quantity is not likely to be naturally constant throughout the seasons or between wet and dry years. Grazing is important in the management of the valley mire. Animals help to break up the tussocks of rank grasses such as purple moor grass, opening the sward up to a greater variety of plants. Some (but not excessive) trampling is necessary to create open soil for invertebrates, mosses and seedling establishment. Grazing also limits the spread of willow, alder and birch carr, which naturally tends to develop around the central watercourse, and should be restricted to this area, other than for a few isolated clumps elsewhere for the benefit of birds and invertebrates. Swamps are also important for invertebrates and birds, and the inclusion of some swamp vegetation, such as reedbed, within the mosaic of habitats present will add to the conservation value of the site. Prescribed burning is also vital in wet heaths.

Lawns and other areas of marshy grassland require grazing to retain their conservation interest, the aim being to keep a relatively open sward without causing excessive poaching. Light trampling can be beneficial in providing areas for seed germination. Regular and careful maintenance of surface drainage, including ditches and drains, can be essential to prevent adverse changes in the plant species composition of the sward.

Ponds may require periodic management to prevent a build-up of plants and silt, which will reduce water depth and cause a build-up of nutrients. It may also be desirable to maintain a range of ponds in various stages of succession whilst maintaining the overall value of the pond habitat. Silt and plant material should only be removed from a portion of the pond at any one time, allowing sufficient time for recovery before other areas are dredged. A range of water depths should be retained, and the importance of exposed muddy margins should not be overlooked.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Flowering plants

Baldellia ranunculoides	Lesser water-plantain	B
Carex lasiocarpa	Slender sedge	B
Carex limosa	Bog-sedge	B
Cicendia filiformis	Yellow centaury	B

Yellow centaury - species dossier - Freshwater Habitats Trust

Eriophorum gracile	Slender cottongrass	B
Galium constrictum	Slender marsh-bedstraw	B
Gentiana pneumonanthe	Marsh gentian	B
Illecebrum verticillatum	Coral-necklace	B

Coral-necklace - Freshwater Habitats Trust

Ludwigia palustris	Hampshire-purslane	B
Lysimachia minima	Chaffweed	B
Mentha pulegium	Pennyroyal	B
Pulicaria vulgaris	Small fleabane	B
Radiola linoides	Allseed	B
Utricularia bremii	New Forest bladderwort	B
Utricularia intermedia	Intermediate bladderwort	B
Utricularia minor	Lesser bladderwort	B
Viola lactea	Pale dog-violet	B
Wahlenbergia hederacea	Ivy-leaved bellflower	B

Beetles

Agabus brunneus	Brown diving beetle	B

Brown diving beetle - New Forest National Park Authority

Tachys obtusiusculus	Edmond's ground beetle	B

Edmond's ground beetle - Natural England

Bees, wasps and ants

Formica picea	Bog ant	B/E

Need for more research on its requirements.

Moths

Heliothis maritima and H. maritima ssp warneckei	**Shoulder-striped clover**	**B/E**

Occurs on damp heathland, recently near Denny Lodge. Feeds on flowers of cross-leaved heath. Plenty of habitat so no reason for decline? More survey.

Shoulder-striped clover moth - Hantsmoths

Grasshoppers and crickets

Stethophyma grossum	**Large marsh grasshopper**	**B**

Large marsh grasshopper - species profile - Freshwater Habitats Trust

Liverworts and mosses

Dicranum bonjeanii	**Crisped fork-moss**	**B**
Dicranum spurium	**Rusty fork-moss**	**B**
Fossombronia foveolata	**Pitted frillwort**	**B**
Hypnum imponens	**Pellucid plait-moss**	**B**
Sphagnum angustifolium	**Fine bog-moss**	**B**
Sphagnum rubellum (S. capillifolium subsp. Rubellum	**N/A**	**B**

Can be confused with Sphagnum capillifolium s.str. which is more likely to be found in damp areas in the pasture woodlands.

Sphagnum-capillifolium-subsp.-capillifolium-rubellum.pdf

Sphagnum contortum	**Twisted bog-moss**	**B**
Sphagnum molle	**Blushing bog-moss**	**B**
Sphagnum subsecundum	**Slender cow-horn bog-moss**	**B**
Sphagnum teres	**Rigid bog-moss**	**B**

Beetles

Bagous brevis	**N/A**	**B/E**

Found on Ranunculus flammula in ponds. Records are old, so more survey is required to determine presence and potential for searching new sites. Maintain/expand habitat.

Bagous collignensis	**N/A**	**B/E**

Found on Myriophyllum in ponds. Records are old, so more survey is required to determine presence and potential for searching new sites. Maintain/expand habitat.

Bagous frit	**Bagous frit**	**B/E**

Found in Sphagnum bogs with Bogbean. Records are old, so more survey is required to determine presence and potential for searching new sites. Maintain/expand habitat.

Priority species assemblage: New Forest ephemeral and shallow ponds

Measures: New Forest SSSI Site Management Plan - Views About Management (naturalengland.org.uk)
For these species, it is important to maintain small, shallow ponds and temporary pools, and avoid drainage, unnecessary clearance, infilling, and deepening. Prevent pollution and eutrophication by avoiding fertiliser use near ponds, or in areas that might drain into a pond. Management should be on a rotational basis, with any essential dredging limited to less than 50% of the pond in any two-year period. Stocking densities need to be carefully balanced to prevent water bodies becoming overgrown or excessively poached and eutrophic from overstocking.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Credit: Neil Phillips

Beetles

Dieckmanniellus gracilis **N/A** **B**
Associated with water purslane (Lythrum portula) in damp areas.
Nanophyidae | UK Beetle Recording

Graptodytes flavipes **N/A** **B**
Occurs in both temporary and permanent heathland pools, although most frequent in the former. Also recorded from slow running water on heathland. Main populations now confined to heathland areas in west Cornwall, Dorset and the New Forest

Helophorus laticollis **New Forest mud beetle** **B**
A very rare and restricted beetle found in shallow grassy wet pools in which they place their cocoons among vegetation in the shallow water. Drought and overshading believed to be the cause of its decline.

Crustacea

Triops cancriformis **Tadpole shrimp** **B**
It is important that the pond dries out each year, as drying out and re-wetting triggers the hatching of eggs on the pond substrate. There should also be sufficient food supply when the pond fills, such as algae and small aquatic invertebrates. Grazing livestock poaching the pond margins is also essential especially as dung provides nutrients. Seek to establish more temporary ponds in the immediate vicinity in order to disperse and expand population.
Tadpole shrimp - Bug Directory - Buglife

Molluscs

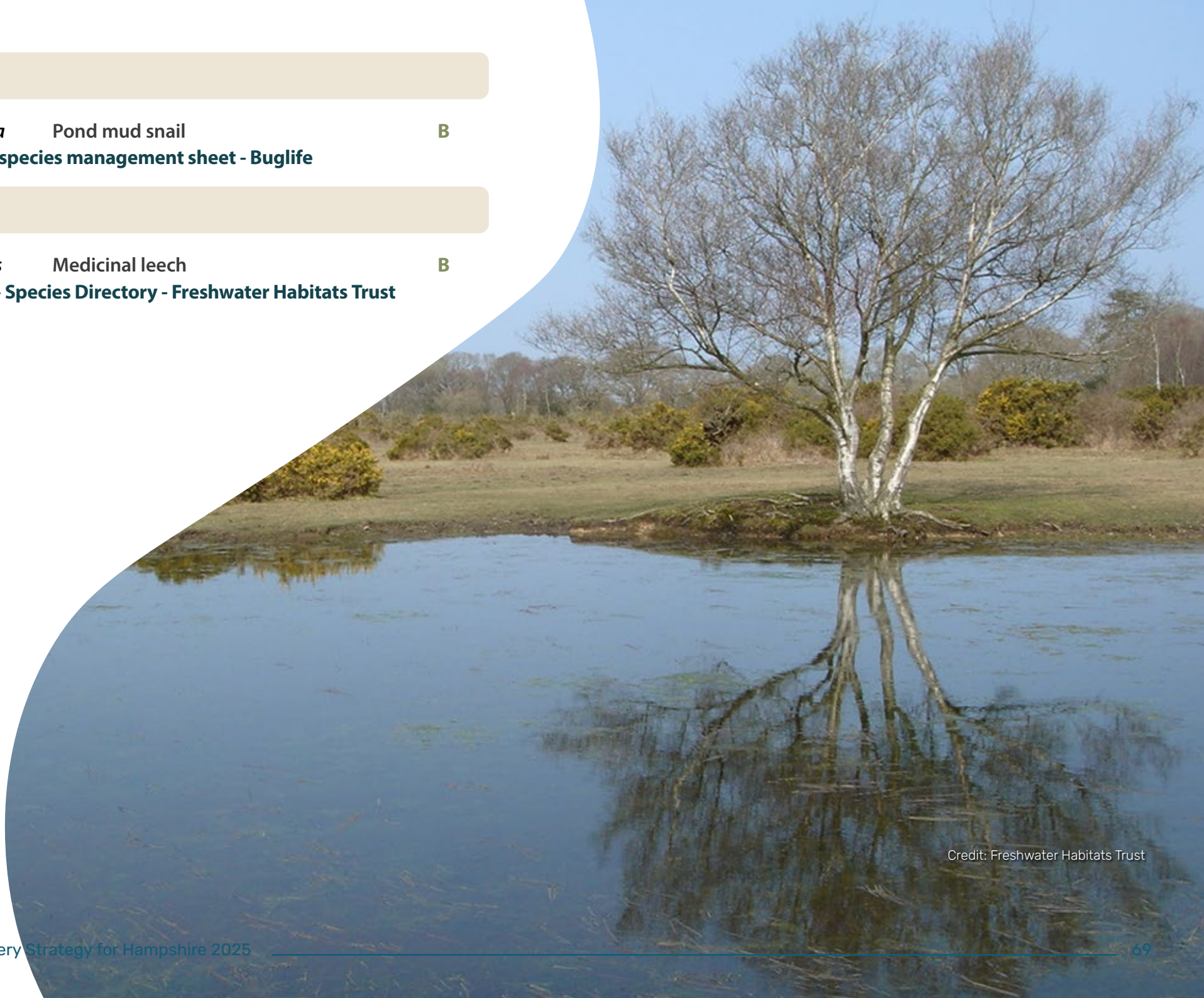
Omphiscola glabra Pond mud snail B

Pond mud snail - species management sheet - Buglife

Annelids

Hirudo medicinalis Medicinal leech B

Medicinal Leech - Species Directory - Freshwater Habitats Trust



Credit: Freshwater Habitats Trust

Priority species assemblage: New Forest dry and wet heath

Measures: New Forest SSSI Site Management Plan - Views About Management (naturalengland.org.uk)
These species require grazing and prescribed burning to maintain a varied structure of uneven-aged stands of native heathers and other characteristic plants. It is beneficial if all stages of the heather life cycle are present. Areas of wet heath require more limited management, but light grazing is needed to maintain the variation in vegetation composition and structure, and for controlling invasive grasses such as purple-moor grass. Retaining scattered individual trees and patches of scrub is important for many species, for example, the maintenance of scattered mature Scots pine in undisturbed locations will provide suitable nest sites for hobbies. Similarly, gorse scrub for Dartford warblers and mature heather for breeding.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Beetles

Bembidion nigricorne **N/A** **B**
A New Forest species found in open habitats, litter and on bare ground. Maintain the New Forest pastural grazing system as per the New Forest SSSI and SAC Management Plans. Raise awareness of the importance and locations of this threatened beetle. Re-survey extant sites

Bees, wasps and Ants

Nomada roberjeotiana **Tormentil nomad bee** **B**
A parasite of ground nesting Andrena tarsata which forages on Tomentil on acid grass/heath. Avoid heavy grazing from March to September to maximise the abundance of flowering Tormentil areas in areas where it occurs. Very old records, need a new survey. **Tormentil nomad bee - species management sheet - Buglife**

Flies

Ogcodes gibbosus **Smart-banded hunchback** **B/E**
Requires a mosaic of heathland with scattered scrub. More survey required. Also found on several downland SSSIs.

Moths

Coscinia cribraria **Speckled footman** **B/E**
Recently recorded in the New Forest after a four-decade absence at Hasley Hill and Ogden's Purlieu. Larvae feed on bristle bent, heather, bell heather, cross-leaved heath and bilberry. Research into its decline, and raise awareness with landowners. **Speckled footman moth - Hantsmoths**

Pachythelia villosella **Black sweep** **B**

Most recent records are from around Beaulieu Road Station, declining and previously known from a number of heathland areas in the New Forest. Larvae feed on heather, bell heather, various grasses, birch and willow. Moderate or heavy grazing pressure seems more likely to threaten the species, since larva cases appear absent from even moderately short, grazed heather.

Black sweep moth - Hantsmoths

Lichens

Cladonia mediterranea **Reindeer lichen** **B**

Raise awareness of the importance and locations of these rare lichens with site managers. **Cladonia mediterranea | The British Lichen Society**

Credit: Neil Sanderson

Priority species assemblage: New Forest dry heaths with sandy exposures

Measures: New Forest SSSI Site Management Plan - Views About Management (naturalengland.org.uk)
These species require sufficient grazing to provide some light poaching to create small pockets of bare peat and sandy ground with areas of sparse, short vegetation that are important to a variety of specialised invertebrates. Monitor populations.

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Beetles

Anisodactylus nemorivagus Heath short-spur **B**
Scarce in southern England, found on dry sandy heath.

Poecilus kugelanni Kugelann's green clock **B**
Kugelann's green clock beetle - Back from the Brink

Bees, wasps and ants

Andrena tarsata Tormentil mining bee **B**
The Species | The Species Recovery Trust | tormentil mining bee

Ceropales variegata N/A
Western New Forest and Dorset Heaths. One record in 2005 near Brown Loaf Cutting. **Ceropales variegata | BWARS**

Cryptocheilus notatus N/A **B**
Cryptocheilus notatus | BWARS

Homonotus sanguinolentus Bloody spider-hunting wasp **B**
Homonotus sanguinolentus | BWARS

Tapinoma erraticum Erratic ant **B**
Tapinoma erraticum | BWARS

Grasshoppers and crickets

Chorthippus vagans Heath grasshopper **B**
Chorthippus vagans (Eversmann, 1848)Heath Grasshopper | Orthoptera & Allied Insects

Measures: New Forest SSSI Site Management Plan - Views About Management (naturalengland.org.uk)

The New Forest ancient wood pasture supports the richest moss and lichen flora in lowland Europe, and an exceptional diversity of fungi and invertebrate species. Wood pasture requires extensive grazing that promotes an open woodland with some scrub and young trees in between the main woodland trees. Grazing is usually carried out by deer, pigs, ponies, and cattle. Old pollards may need special attention in terms of reducing competition from younger growth or lightening the crown, for example, by re-pollarding, although this is currently only being carried out on holly. Large cut branches, fallen dead wood or the remains of old trees should be left on site as they may contain populations of important fungi or invertebrates. Grazing or cutting helps to maintain old trees in relatively open conditions, which is desirable where these are important for lichens on the lower trunks. Identify younger suitable replacement host trees and support them towards veteran status with sensitive management around them to create the right conditions. Atmospheric nitrogen deposition needs to be reduced. Site managers should be aware of the locations of these priority species. Survey and monitor. The British Lichen Society Woodland management | Woodland Wildlife Toolkit

The following table lists the species' *Taxon* name followed by the *Common* name and its *Habitat recovery class*. Beneath each entry are additional comments, measures, and links to fact sheets and web resources.

Fungi

Rubinoboletus rubinus **Crimson bolete** **B**

3 Hampshire/38 UK records. New Forest only.

Hydnellum concrescens **Zoned tooth** **B**

57 Hampshire/200 UK records. A New Forest species.

Hydnellum scrobiculatum **Ridged tooth** **B**

One old record New Forest/12 UK records.

Phellodon confluens **Fused tooth** **B**

16 Hampshire/77 UK records. A New Forest species.

Phellodon melaleucus **Grey tooth** **B**

31 Hampshire/142 UK records. A New Forest species.

Phellodon niger **Black tooth** **B**

9 Hampshire/70 UK records. A New Forest species.

Sarcodon squamosus **Scaly tooth** **B**

Rare. One record in VC11 but not in Hampshire (near Christchurch). 5 unconfirmed records in the New Forest on the NBN Atlas 1904 to 2015.

Boletus fragrans **Fragrant bolete** **B**

One old record New Forest/3 UK records.

Boletus pseudoregius **The pretender** **B**

Specialist habitats in New Forest.

Boletus pseudosulphureus **N/A** **B**

Specialist habitats in New Forest. One old record New Forest/4 UK records.

Fungi - lichen related

Arthonia invadens **N/A** **B**

New Forest Woodland. Included in Threatened Species Recovery Action (TSRA) project summer 2025. Parasitic of Schizotrema quercicola in ancient woodland, typically in sheltered humid woods with large populations of the host. Normally confined to larger woodland meta-sites with extensive stands of humid but well-lit old woodland. Maintain open conditions at extant sites and replicate these conditions in suitable nearby woodlands (ancient, humid).

Melaspilea amota **N/A** **B**

New Forest Woodland. Included in Threatened Species Recovery Action (TSRA) project summer 2025. Requires acid bark on veteran trees in old growth woodland, mainly found on oak. Inclusion of oak in species mix for woodland creation/woodland enhancement within close vicinity of existing populations.

Stictographa lentiginosa **N/A** **B**

New Forest Woodland. Included in Threatened Species Recovery Action (TSRA) project summer 2025.

Xerotrema quercicola **N/A** **B**

New Forest Woodland. Included in Threatened Species Recovery Action (TSRA) project summer 2025. Retain abundant standing oak deadwood at known and adjacent suitable sites and build connectivity between metapopulations.

Lichens

Agonimia octospora **N/A** **B**

New Forest Woodland. Included in Threatened Species Recovery Action (TSRA) project summer 2025. Found on base-rich bark of trunks of aged Quercus and Fagus, often amongst mosses, in somewhat sheltered situations in old woodlands. Support host trees to achieve veteran status. Replicating habitat in the timeframe of LNRS will be a challenge. Will require setting up young habitat that will reach suitable status in the very long term. Promote use of oaks in these habitats as beech will likely be inappropriate due to climate change.

Arthonia anglica **N/A** **B**

New Forest Woodland. Included in Threatened Species Recovery Action (TSRA) project summer 2025.

Bacidia subturgidula **N/A** **B**

New Forest Woodland. Included in Threatened Species Recovery Action (TSRA) project summer 2025. Found on standing deadwood of Holly and Oak. Generally in sheltered, reasonably well-lit locations such as on the edges of glades in pasture woodlands. It is both old growth dependant and intolerant of deep shade. Measures include retaining standing deadwood of host species, supporting host trees to achieve veteran status/and maintaining open conditions and creation of rides and glades.

Buellia hyperbolica **N/A** **B/C**

Found on acid bark and lignum, mainly on old oak but also sweet chestnut, Birch, Yew and ornamental conifers, in parks and pasture woodlands. Has only been found in sites with frequent veteran trees and typically frequent large diameter dead, both standing dead and fallen, trees. It is quite light demanding and is absent from the more shaded parts of woodlands. Vulnerable to ammonia based air pollution. Retain standing and fallen large-diameter deadwood and declining trees where safe to do so. Support potential host trees to achieve veteran status and create open woodland, wood pasture and parkland with host species. Buffer suitable sites from ammonia pollution sources, such as through dense tree and shrub planting.

Byssoloma lmaderence **N/A** **B**

Calicium diploellum **N/A** **B**

Confined to old holly trees in old growth pasture woodlands in oceanic areas. Likely to be highly dependent on historic continuity of old Holly. Ensure continuity of Holly achieving veteran status. Creation of wood pasture with Holly. Maintain open conditions.

Calicium hyperelloides **N/A** **B**

On well-lit to partly shaded, easily wetted Quercus bark and lignum in old growth pasture woodlands and in parklands. Support open-grown oaks to achieve veteran status. Maintain open conditions.

Calicium parvum **N/A** **B**

Found on well-lit veteran or slow growing Pinus sylvestris in humid glade in pasture woodlands in the New Forest and in Scottish native pinewoods. The presence on a non-native tree in the New Forest pasture woodlands is a bit of a dilemma, but it has survived through the retention of aesthetically pleasing old pine trees during pine removal programmes.

Chaenothecopsis savonica **N/A** **B**

Requires retention of deadwood.

Cryptolechia carneolutea **N/A** **B**

Shaded basic bark of often ancient ash, elm and ivy. Support open-grown host tree species to achieve veteran status. Maintenance of light shading.

Enterographa brezhonega **N/A** **B**

New Forest Woodland. Included in Threatened Species Recovery Action (TSRA) project summer 2025. Found in sheltered and humid old growth woodland. Most sites are pasture woodland or relics of this habitat. Usually found in woods with large populations of *Coenogonium confusum*. Maintenance of conditions at existing sites. May be difficult to replicate conditions in new sites. Introducing similar management to existing nearby ancient humid woodland with low importance for other species.

Enterographa elaborata **N/A** **B**

A woodland species that requires good indirect light and is absent from deeply shaded stands but conspicuously avoids southern aspects on trees, even in dense woodland. It requires veteran trees with complex trunk architectures that allow rain tracks to form. In the New Forest it is mainly dependent of naturally damaged, leaning or twisted veteran beeches. Support trees to reach veteran status.

Enterographa sorediata **N/A** **B**

New Forest Woodland. Included in Threatened Species Recovery Action (TSRA) project summer 2025.

Lobaria pulmonaria **Lungwort lichen** **B**

Very sensitive to atmospheric pollution and slow to recolonise.

Lobaria pulmonaria | The British Lichen Society

Megalaria laureri **Laurer's catillaria** **B A**

Fagus specialist that is rare in Europe and confined to the New Forest in Britain. Requires a continuity of well-lit but sheltered and humid veteran Beech.

Megalospora tuberculosa **N/A** **B**

On base rich bark on veteran trees in pasture woodlands. Requires a continuity of well-lit but sheltered and humid veteran trees.

Micarea hedlundii **N/A** **B**

A specialist of large hulks of dead wood in humid situations, but not too shaded, internationally rare. Research needed to better inform ecology and cause of rarity/pressures.

Parmelinopsis horrescens **N/A** **B**

A southern oceanic acid bark species of humid old woodlands but light demanding.

Parmelinopsis minarum **New Forest parmelia** **B**

A southern oceanic acid bark species of humid old woodlands but strongly light demanding.

Pertusaria pustulata **N/A** **B**

A specialist of veteran Beech and the bulk of its British population in the New Forest. Requires a continuity of well-lit but sheltered and humid veteran Beech.

Phaeographis lyellii **N/A** **B**

A moderately mobile species of slow growing often younger trees, such as suppressed young Beech, some evidence it is now spreading. Included in Threatened Species Recovery Action (TSRA) project summer 2025.

Phlyctis agelaea **N/A** **B/E**

Research needed better understand habitat requirements and impacts of air pollution.

Porina hibernica **N/A** **B**

A southern oceanic species of base rich bark on veteran trees in pasture woodlands, with most of its British population in the New Forest. Requires a continuity of well-lit but sheltered and humid veteran trees

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Porina rosei **N/A** **B**

A much confused taxa, due to the more frequent occurrence of a remarkably similar, at least when sterile, but unrelated lichen, **Coenogonium nimisii**, the existence of which was not suspected until revealed by sequencing. Both occur in the New Forest, on base-rich bark of Fagus, Quercus and Taxus, in old growth woodland, and both rare and threatened species.

Pyrenula nitida **N/A** **B**

A Fagus specialist that is confined to the New Forest and Burnham Beeches in Britain. Requires a continuity of well-lit but sheltered and humid veteran Beech. Healthy local populations within the New Forest.

Ramonia chrysophaea **N/A** **B**

An ephemeral of bared parches on base rich bark on veteran trees in pasture woodlands. Requires a continuity of well-lit but sheltered and humid veteran trees.

Ramonia dictyospora **N/A** **B**

An ephemeral of bared parches on base rich bark on and on lignum inside veteran trees in pasture woodlands. Requires a continuity of well-lit but sheltered and humid veteran trees.

Ramonia nigra **N/A** **B**

An ephemeral of bared parches on base rich bark on and on lignum inside veteran trees in pasture woodlands. Requires a continuity of well-lit but sheltered and humid veteran trees. On Holly and Oak in the New Forest, mainly on Ash beyond.

Reichlingia zwackhii **N/A** **B**

Initially parasitic on Phlyctis argena but confined to veteran trees in pasture woodland.

Rinodina isidioides **N/A** **B**

A southern oceanic species of base rich bark on veteran trees in pasture woodlands. Requires a continuity of well-lit but sheltered and humid veteran trees.

Schismatomma ricasolii **Speckled script-lichen** **B**

New Forest Woodland. Included in Threatened Species Recovery Action (TSRA) project summer 2025.

Scutula circumspecta **N/A** **B**

In small wound track in base rich bark on veteran tree in pasture woodland, all on Beech in the New Forest, which supports the largest British population. Requires a continuity of well-lit but sheltered and humid veteran Beech.

Scytinium fragrans **N/A** **B**

New Forest Woodland. Included in Threatened Species Recovery Action (TSRA) project summer 2025.

Scytinium palmatum **N/A** **E**

Site assessments to identify possible threats in order to design species specific management interventions accordingly.

Synarthonia astroidestera **N/A** **B**

New Forest Woodland. Included in Threatened Species Recovery Action (TSRA) project summer 2025.

Tylophoron hibernicum **N/A** **B/E**

Research into cause and effect between climate change and species distribution changes.

Varicellaria velata **N/A** **B**

An internationally rare species of mesic bark on veteran trees, Beech and Oak in the New Forest, which supports over 90% of the British population. Requires a continuity of well-lit but sheltered and humid veteran trees.

Wadeana dendrographa **N/A** **B**

An Ash specialist, found on veteran Ash, so very threatened by Ash Dieback. The New Forest includes some records from Oak as well as many from Ash.

Wadeana minuta **N/A** **B**

On base rich bark on veteran trees in pasture woodlands. Requires a continuity of well-lit but sheltered and humid veteran trees. Very rare south of the Scottish Highlands.

Liverworts and mosses

Codonoblepharon forsteri **Knothole yoke-moss** **B**

A specialist moss of rain tracks and wet pockets on roots and knotholes of mature Beech trees. The New Forest is the UK stronghold with the only other populations at Burnham Beeches (Buckinghamshire) and Epping Forest (South Essex).

Beetles

Anoplodera sexguttata **6-spotted longhorn** **B**

Epierus comptus **Epierus comptus** **B**

Gnorimus nobilis **Noble chafer** **B**

Found only in the New Forest in Hampshire and in old orchards elsewhere. It is dependent on old, decaying wood within live trees especially cherry, plum and apple, and oak and beech in the New Forest. Maintain old growth trees, encourage succession. Plant more orchards. **Noble chafer beetle facts - People's Trust for Endangered Species**

Megapenthes lugens **The Queen's executioner** **B**

Woodland Wildlife Toolkit

Melandrya barbata **Bearded false darkling beetle** **B**

Bearded false darkling beetle - Back from the Brink

Flies

Caliprobola speciosa **N/A** **B**

Caliprobola speciosa - NBN Atlas

Scenopinus niger **Forest windowfly** **B**

One record 2010 Denny Wood.

Bees, wasps and ants

Andrena ferox **Oak mining bee** **E**

Not associated with deadwood. Ground nesting and feeding on oak. Only known in the UK within the New Forest. **Adrena ferox - BARS**

Credit: Paul Brock