

# Creating scrapes for butterflies & moths

Scrapes can be a simple and effective way of providing bare ground habitat, adding variation in aspect, removing nutrient enriched soils and encouraging a diversity of butterfly and moth foodplants

## SOME BUTTERFLIES AND MOTHS THAT CAN BENEFIT

(top to bottom)

- Chalk Carpet moth
- Grayling
- Small Blue
- Striped Lychnis moth
- Dingy Skipper
- Wall
- Grizzled Skipper

## WHY CREATE SCRAPES?

Many butterflies and moths depend on plants that are quickly out-competed by vigorous vegetation. These plants are typically early colonisers of disturbed soils and need to germinate within patches of bare ground if they are to flourish. The creation of earth scrapes will produce a mosaic of sparsely vegetated patches that provide the breeding, nectaring and warm basking areas that many butterflies and moths require. Scrapes will also help to diversify the vegetation of a site and can supply bare ground habitat that is needed by other insects such as beetles, solitary bees and wasps. Scrapes can be particularly useful where large-scale or more complex habitat creation methods such as butterfly banks are inappropriate.

## BEFORE YOU START

**When to use these techniques:** The techniques described in this factsheet will produce small areas of new habitat or enhance existing habitat for butterflies and moths. Scrapes are suitable for open areas and can also be effective along woodland rides, for example. The results will vary according to soil type. These techniques are not suitable for creating large-scale wildflower meadows or for returning arable land to flower-rich grassland.

**Planning:** Carefully survey the existing habitat. You do not want to destroy existing flower-rich grassland or the location of a rare orchid. Check for any archaeological interest (even if not a listed site) and be aware of possible restrictions on soil disturbance, seeding or planting on designated sites such as a nature reserve or SSSI.

**Positioning:** Carefully plan where to locate scrapes. The aim is to remove topsoil to expose less nutrient rich soil. Consider how the site is used and managed, make sure that their location will not block access points or cause problems with the present habitat management. Scrapes work best if created on slopes, particularly if they are south-facing, but can also be used on flat ground. Select areas that will not be shaded by tall trees or buildings and, as scrapes can be a long term feature, do plan for shading by future tree growth. It is usually better to create several small scrapes than one large scrape.

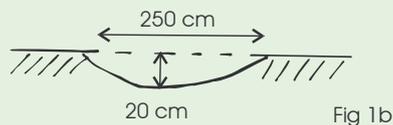
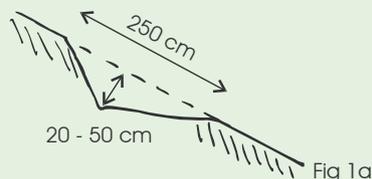
**Size of scrapes:** There is no defined size and scrapes should be designed to fit the local conditions. However, the minimum size should not be less than 2.5 by 2.5 metres otherwise they will quickly be swamped by the surrounding vegetation. It is suggested that the maximum area of scrapes should not cover more than 10% of the total habitat area.

**Shape of scrapes:** The simplest shape is rectangular (see photograph above of Magdalen Hill Down in Hampshire). This may be a good option if there are limited resources. A more complex "eye-shaped" scrape, as in example 1 overleaf, will create a greater variety of surfaces and aspects. This shape is particularly recommended for flat ground where there is little natural topographic variation and may present a more natural appearance.

## CREATING THE SCRAPES

**1. On sloping sites,** remove a triangular wedge of soil approximately 20 to 50 cm deep using suitable earth-moving machinery (Figure 1a). The depth of a scrape on a sloping site will depend on the habitat you wish to create. For example, if you wish to produce a vertical back "wall" to the scrape as potential habitat for the Wall or Grayling butterfly then 50 cm depth may be needed. On a very steep slope, machinery may not be possible and the scrape will have to be dug by hand.

On **flat ground,** remove a rectangular area of soil about 20 cm deep (Fig 1b). A deeper cut is usually not advisable because deep holes across a site can be a hazard and on some soils these may become small ponds.



It may be simplest to match the width to that of the digging equipment of the machinery. Remove the spoil away from the scrape. This can be used to make a small bank (see top photograph) which will create further habitat diversity. Any turf removed from the scraped area can also be translocated here.



2. Enhance the scrape by digging a narrow trough (15 - 20 cm deep) towards the back and pulling the soil from this trough forward to create a slight lip at front (Figs 2a and 2b). The lip creates additional variation in slope and may retain moisture so providing both wet and dry patches within a single scrape.

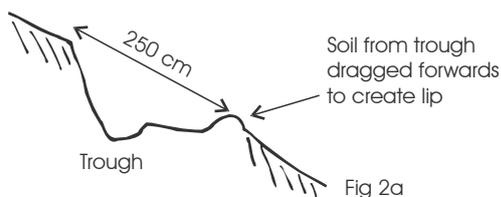


Fig 2a

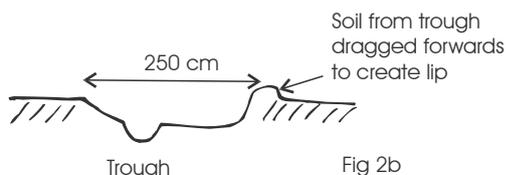


Fig 2b

3. The scrape can be left as a simple rectangular/square shape or further variation of habitat can be produced by extending the scraped area to either side producing an eye-shaped area of about 4 metres in width (see examples of different approaches below).

4. The scraped area can be left to develop naturally but it can often be beneficial to seed sparsely with appropriate local provenance wildflower seed. Additionally, plug plants can be used to supplement seeding (see Butterfly Conservation Management Factsheet *Seeding and plug-planting for butterflies* for detailed methods).

## MAINTENANCE

Scrapes can be managed by whatever method is used over the rest of the site, so if the site is mown or grazed, then the scrapes will be included within the usual mowing or grazing regime.

However, the overall aim is to maintain about 50% of the surface of the scraped area as bare ground, with 50% covered by a variety of early successional vegetation. The development of the scrapes will greatly depend on the soil type, but once the area of bare ground falls to less than this, then further management should be considered utilising one or more of the options below: -

1. Leave the existing scrapes untouched and dig a supply of new scrapes
2. Re-scrape the surface so removing all vegetation
3. Use herbicide such as a 15% glyphosate treatment
4. If young scrub is establishing, then cut or preferably pull up the young plants by the roots at an early stage

### EXAMPLE 1: SOUTHAM, WARWICKSHIRE

These scrapes have been created on an area cleared of scrub at Southam Quarry. A series of eye-shaped scrapes were created on the flatter areas and a series of rectangular scrapes on an area of south-facing bank using earth-moving machinery. This photograph shows an example of a newly created eye-shaped scrape.

These scrapes successfully create breeding habitat for the Grizzled Skipper and Dingy Skipper in the first year as their larval foodplants grow from the scrape edges over the bare surfaces. The scrapes have also been hand seeded with Kidney Vetch to assist the Small Blue.

The creation of the scrapes is also beneficial in removing areas of invasive Cotoneaster and Wild Privet which would otherwise swamp the open areas.



### EXAMPLE 2: MAGDALEN HILL DOWN, HAMPSHIRE

This is a series of rectangular shaped scrapes on gently sloping south-facing chalk grassland. The photographs here and overleaf shows a scrape in winter, two years after it was created. Soil was removed using an earth-mover to expose the underlying chalk and the top soil piled in a bank along the lower edge. The bare ground has been partly sown and plug-planted with key larval foodplants such as Dark Mullein, Horseshoe Vetch, Kidney Vetch and Common Rock-rose. The aim is to provide maximum benefit for species such as Chalkhill Blue, Grizzled Skipper, Small Blue and Striped Lychnis moth. The scrapes are winter grazed by cattle and sheep and will be left to regenerate naturally.

An equally important objective at this site is to create habitat that can be colonised by rare arable plants. This has been particularly successful with Corncockle, Cornflower and Night-flowering Catchfly all appearing.



**Butterfly  
Conservation**

Saving butterflies, moths and our environment

#### Butterfly Conservation

Telephone: 01929 400209 Email: [info@butterfly-conservation.org](mailto:info@butterfly-conservation.org)

[www.butterfly-conservation.org](http://www.butterfly-conservation.org)

Company limited by guarantee, registered in England (2206468)

Registered Office: Manor Yard, East Lulworth, Wareham, Dorset, BH20 5QP

Charity registered in England & Wales (254937) and in Scotland (SCO39268)



This leaflet was produced as part of Butterfly Conservation's Midland Fritillary Project funded by The Tubney Charitable Trust, SITA Trust and Biffaward

Text: Mike Slater (Warwickshire Branch Butterfly Conservation)

Photographs: Keith Warmington & Wessex Environmental Associates

Illustrations & design: Wessex Environmental Associates