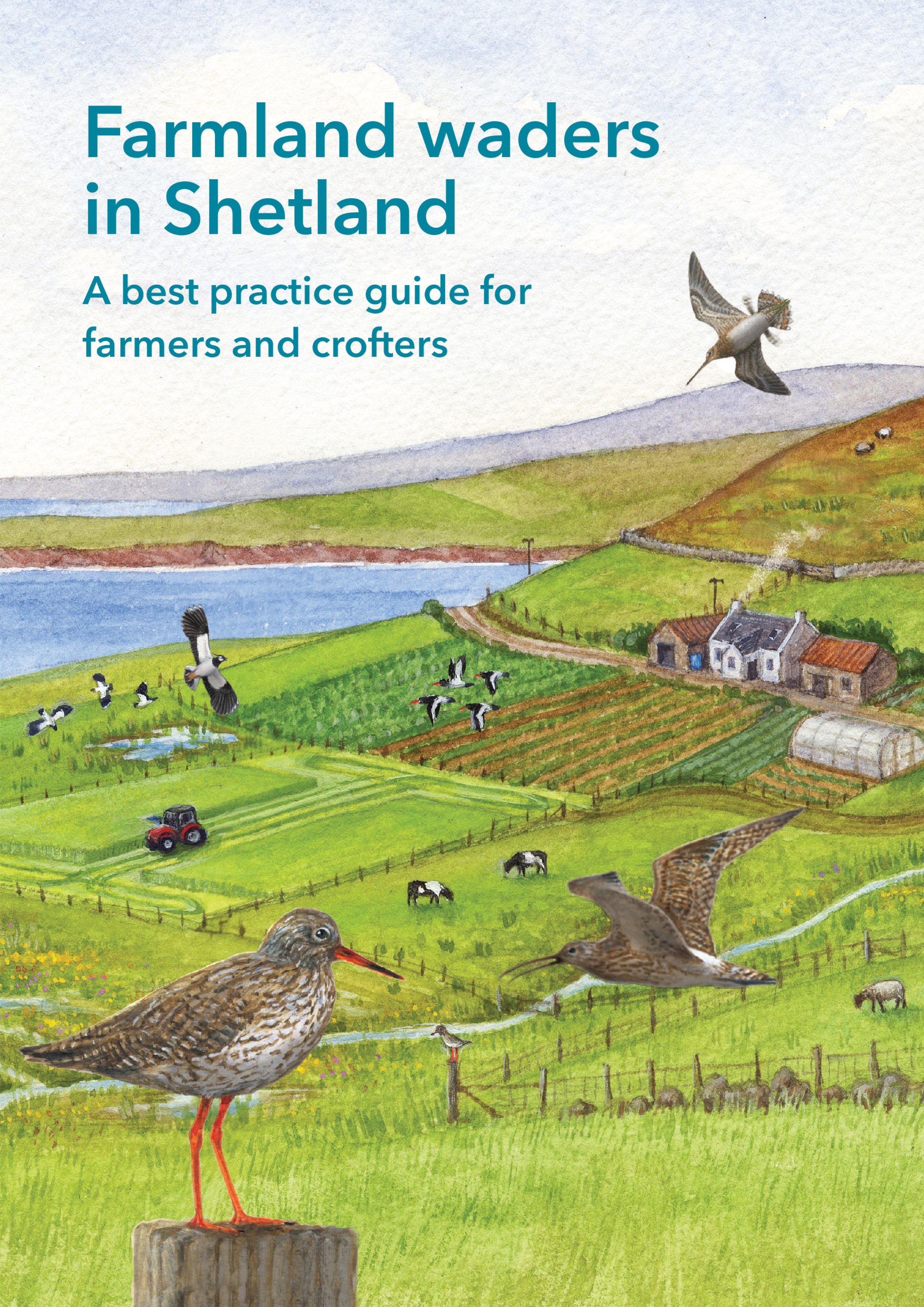
Farmland waders in Shetland

A best practice guide for farmers and crofters



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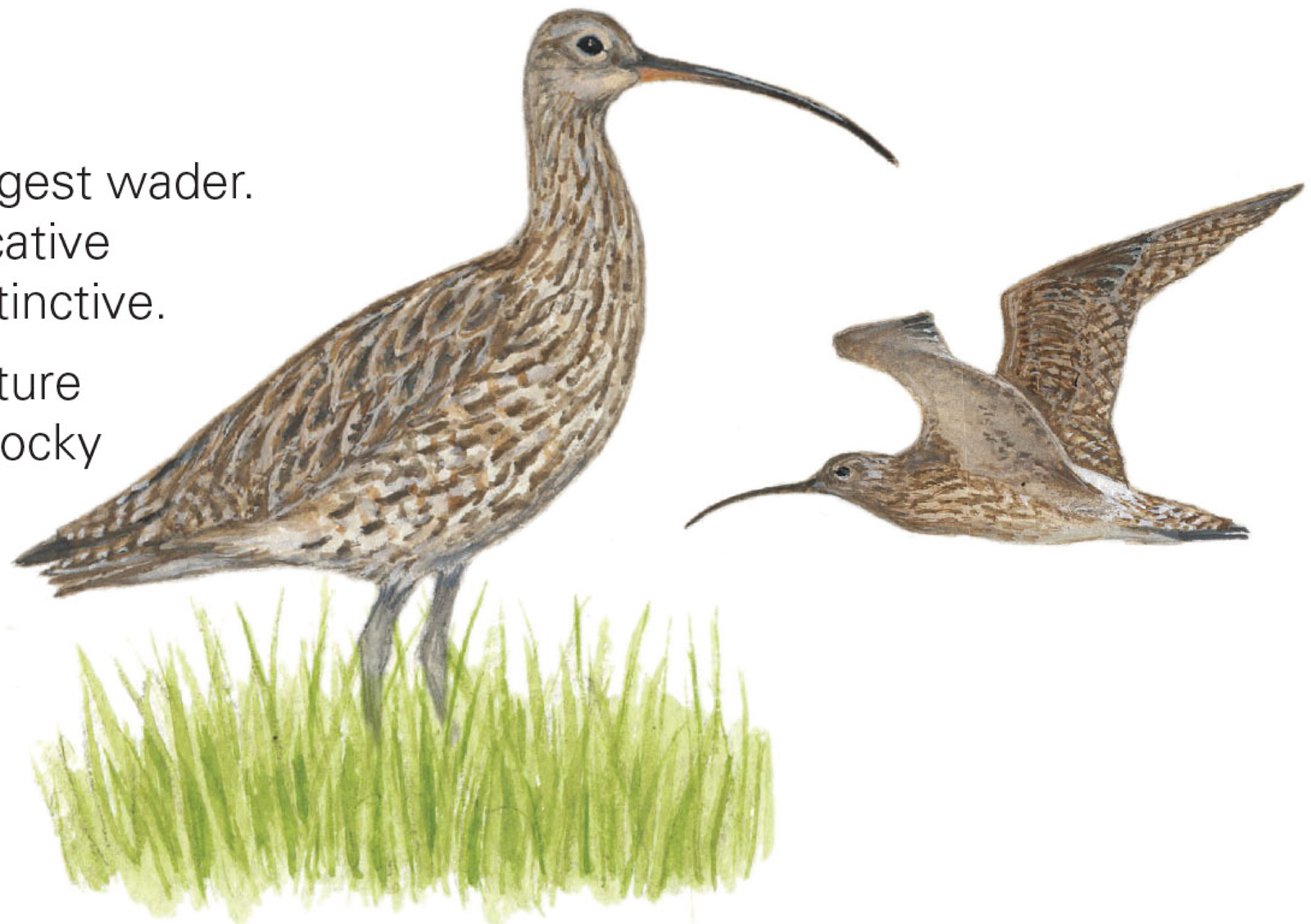
Five wading bird species – curlew, lapwing, oystercatcher, redshank and snipe – are often referred to as 'farmland waders' as they are associated with farming and crofting activities. They are long-legged and wade through shallow water, wet mud or sand to forage, using their bills to find invertebrates. They feed on earthworms, leatherjackets, beetles, spiders, caterpillars and other soil surface insects and their larvae. The waders' different bill lengths and shapes are adapted for a range of ground conditions and prey, allowing them to share similar habitats.

Curlew - *Whaap*

The curlew is Europe's largest wader. Its 'coor-lew' cry and evocative bubbling calls are very distinctive.

Curlews favour rough pasture with tall (over 15cm), tussocky sward and occasionally moorland for nesting.



Lapwing - *Peewit*

The lapwing is a colourful bird with a long crest. It has a 'pee-wit' call and tumbling display flight.

Lapwings prefer lightly grazed grassland with short sward (around 5cm) and scattered tussocks, and shallow pools for feeding.

Common breeding birds at risk

Shetland waders migrate to mainland Europe, Britain and Ireland during the winter and come back to breed in the spring. They need safe nesting sites away from disturbance, and abundant and accessible sources of invertebrates to feed on. Waders nest on the ground. Lapwings and oystercatchers rely on camouflage, laying their eggs on open ground. Curlews, redshanks and snipe rely on concealment, laying their eggs in dense grassland or tussocks. Within hours of hatching, curlew, lapwing, snipe and redshank chicks leave the nest and start feeding by pecking insects off plants. For their safety, parents soon lead chicks to areas of long vegetation to hide them from predators.

Once common across the British Isles, many waders have undergone steep declines. In Scotland, curlews have declined by nearly 60% and lapwings by 55% in the last 25 years. Waders have become one of our highest conservation priorities. Shetland, however, is still a stronghold for them. The sights and sounds of breeding waders define the Shetland spring.

Waders lay clutches of up to four eggs and can make a second attempt if they lose them early. They need to fledge at least one chick every two years to maintain their population. The main reason for their decline is a failure to successfully raise chicks.

Changes in land management practices such as agricultural improvement, increased drainage, intensification of grazing and use of machinery during the nesting season, have led to a significant loss of suitable breeding habitat.

Land management for waders

Low intensity crofting and farming practices that create suitable habitats for waders are the best way to support them and reverse downward trends. The continuation of active land management is very important to keep breeding habitats in good condition. Wet grassland, lightly grazed in late summer to create a mixture of sward heights, is ideal. High quality habitats will also help reduce the risk of predation.

Breeding calendar

	Main laying period	Incubation	Hatching to fledging
Curlew	17 Apr - 31 May	27 - 29 days	32 - 38 days
Lapwing	25 Mar - 25 May	25 - 34 days	35 - 40 days
Oystercatcher	15 Apr - 9 Jun	24 - 27 days	34 - 37 days
Redshank	14 Apr - 7 Jun	24 days	25 - 35 days
Snipe	31 Mar - 24 Jun	18 - 20 days	19 - 20 days

1. Wet grassland and wetland

These are the best habitats for farmland waders. Abundant cover and a high water table provide nest sites and food.

A diverse sward structure with a mosaic of tall and short vegetation, with frequent patches of rushes or grass tussocks, can provide suitable conditions for a range of species.

2. Improved or semi-improved grazed grassland

These grasslands may support breeding waders where a suitable sward structure is maintained throughout the breeding season. From April to July, nests and young chicks are vulnerable to trampling. Chicks are more likely to fledge where livestock numbers are low.

3. Crops

Lapwings and oystercatchers favour bare ground or a short sward for nesting. They need an open view of their surroundings. Although silage crop provides appropriate habitat in the early spring, the growth of silage grass is usually too fast and uniform to be suitable for them and often leads to nest abandonment.

4. Hill

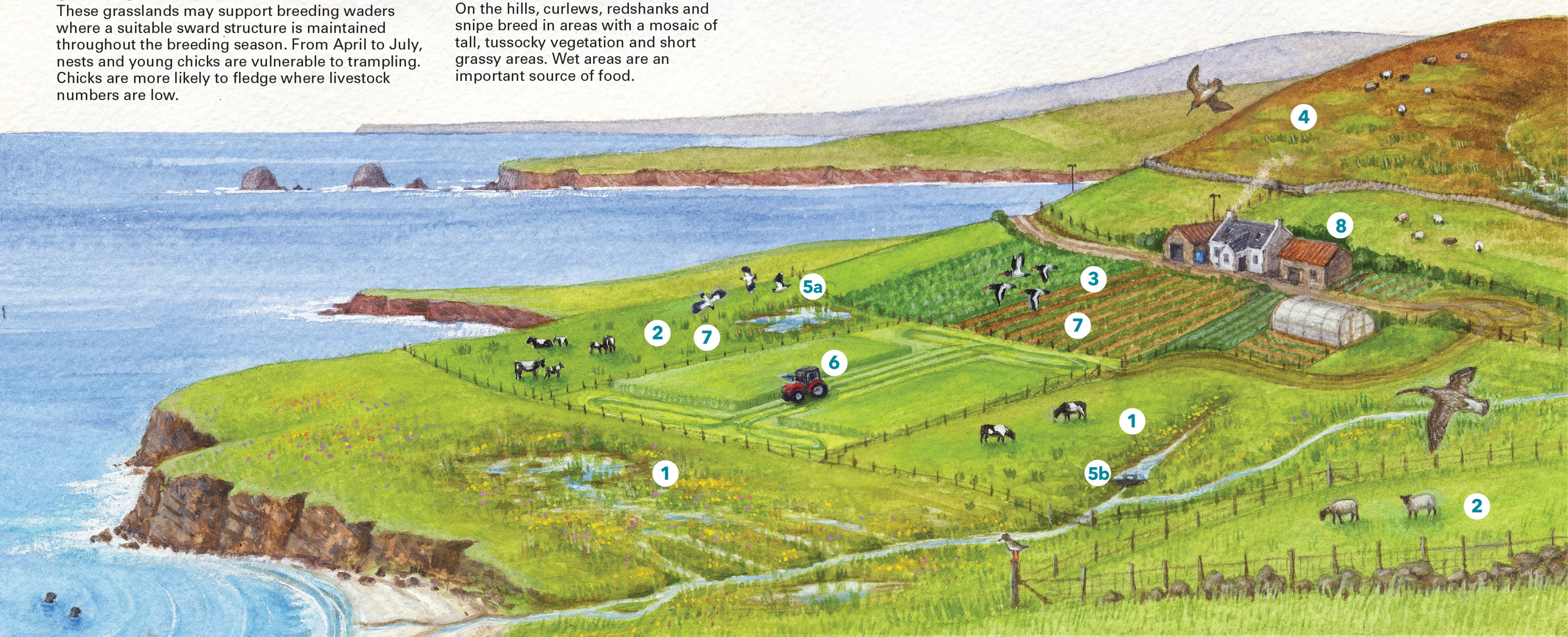
On the hills, curlews, redshanks and snipe breed in areas with a mosaic of tall, tussocky vegetation and short grassy areas. Wet areas are an important source of food.

5. Wet features

Natural hollows, scrapes and shallow, vegetated drains are valuable feeding areas, especially for chicks.

A **scrape** (5a) is a shallow pool with gently sloping edges; short vegetation with some tussocks and muddy patches provide an easily accessible source of invertebrate food. The more edges the better. A good scrape remains wet from April to July.

Sluices (5b) will stop the flow of water in man-made drains and help raise the water table in the spring.



6. Bird-friendly mowing

Start cutting from the centre outwards and leave an uncut margin around the field. Unfledged chicks present in the crop will be able to escape to long vegetation.

7. Healthy soil

The best soils have lots of earthworms, a good structure and optimum pH and nutrient levels. A pH above 6.0 and low compaction is ideal.

8. Predation

Wader eggs and chicks are vulnerable to ground predators like polecat ferrets, hedgehogs and cats, and birds such as crows and gulls. Waders nest on the ground in open landscapes and avoid nesting close to trees and shrubs that may host predators.

The risk of predation increases when disturbance occurs. The eggs are vulnerable if the adult leaves them.

Taking care of wader habitats

During the breeding season, waders need safe nest sites and abundant food.

Create a safe nesting habitat

Graze with sheep or cows between August and March to remove annual vegetation growth and maintain an open sward. By the end of March aim to have a mosaic of short (less than 5cm) and tall (over 15cm) vegetation. Cattle tend to create the best outcomes. If lapwings use the site, provide a mainly short sward with scattered tussocks.

Avoid grazing between April and July to minimise the risk of trampling of eggs and chicks. If that isn't possible, maintain a low grazing density – below 1 LU/ha on grasslands. In some cases, very light grazing may be suitable. Light cattle and especially young, docile animals can achieve good results.

On arable ground and improved grassland, using machinery where birds are nesting can be damaging. If unavoidable, walk across the field on the day before cultivation. An adult bird taking off is likely to be sitting on a nest. Mark the site and leave the area untouched. A bird calling above you is probably protecting chicks. They are difficult to see so keep a close eye on the ground when driving. In silage and hay parks, delay mowing until July. Retain wet, uncut patches for shelter and feeding.

Controlling the spread of encroaching rushes and iris should maintain the extent of suitable habitat.

Provide abundant feeding opportunities

Maintain high water levels in wet grasslands and wetlands during the spring:

- Block free-flowing drains with sluices from late March until mid-July.
- Create wader scrapes by excavating small areas of damp ground. Design the feature so that it has long edges and shallow muddy slopes. Disperse several small features across the site. Livestock grazing outside the breeding season will maintain short and sparsely vegetated edges and bare patches.
- Re-profile steep-sided ditches so slopes are shallower than 30º, to slow water flow and allow vegetation to grow. It will increase the feeding surface and reduce the risk of chicks (and livestock) getting trapped.
- Avoid creating new drainage.

Promote soil health:

A healthy soil is characterised by a high number and diversity of organisms. Its biological, chemical and physical elements are in balance and it supports plant growth, stores carbon and controls pests and diseases.

Earthworms are a good indicator of soil health, and easy to count. They are also a major food source for waders, so good soil health will benefit waders. To assess the soil structure and determine if compaction is an issue, carry out a Visual Evaluation of Soil Structure (VESS). Test your soil regularly to identify any nutrient deficiency.

Steps to improve soil condition include managing grazing rotations to stimulate vegetation growth, adding manure/slurry and lime in improved grasslands, and minimising tillage on arable land.

Oystercatcher - *Shalder*

The oystercatcher is a large bird with a familiar loud piping call.

Oystercatchers nest in short grassland and feed on a variety of prey, including earthworms.

Redshank - *Ebb-cock*

The redshank is medium sized with a noisy call. It is a wary bird, often seen standing nervously on a fence post and bobbing its tail.

Redshanks seek a mosaic of tall, tussocky vegetation for nesting, and short wet grassland and shallow pools for feeding.

Snipe - *Horsegok*

The snipe is a medium-sized shy bird, not often seen in the open. In its display flight, it creates a whirring sound by vibrating air through its outer tail feathers.

Snipe nest in tall tussocks in damp grassland, and feed in wet areas like drains and pools close to their nests.

5 things you can do for waders

1. Carry out surveys from mid-April to early July to identify areas on your farm or croft that waders already use, or areas that could support them.
2. Manage grazing to produce a suitable sward for breeding birds, ready by the time they return in the early spring.
3. Protect wetlands and maintain high water levels in grasslands throughout the spring by blocking ditches and consider creating scrapes.
4. Remove livestock or keep numbers low from April until the end of June to minimise the risk of trampling of eggs and chicks.
5. Avoid machinery operations between April and June to prevent the destruction of eggs and chicks.

Far left:
Camouflaged lapwing nest

Left:
Newly hatched curlew chicks in concealed nest

Further information

Farm Advisory Service (www.fas.scot) Technical Notes:

TN688: Management and Conservation for Farmland Waders
TN721: Soil Biodiversity and Soil Health

Visual Evaluation of Soil Structure score chart (www.sruc.ac.uk)

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