

# Report of the WSG Register of permanent colour marks

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The use of colour-marking facilitates studies of bird behaviour, movements and survival. It is a well-tried-and-tested tool in wader research and is popular with both amateur and professional researchers. The WSG colour-marking register functions as a central record of wader marking schemes - it avoids interference between projects and provides a single contact point for the reporting of sightings. The register co-ordinates colour-marking schemes for waders throughout the East Atlantic flyway, but does not deal with schemes operating in the Americas or on the Asian/Pacific flyway. It is concerned with permanent marks which may last the lifetime of the bird, not with temporary ones such as plumage dyes. These are co-ordinated by Roger Beecroft who can be contacted at the same address.

When waders were first colour-ringed, the choice of colours and ring combinations was largely determined by the ringer, according to the rings that were available. It soon became obvious, especially with the more commonly marked species such as Ringed Plover *Charadrius hiaticula*, and the longer-lived species such as Oystercatcher *Haemotopus ostralegus*, that some control was necessary to avoid new schemes ringing birds with combinations that had already been used elsewhere. Attempts were made to gather all information about colour-marking schemes, and eventually a central register was established. This exercise has been largely successful, at least for the UK and for much of the rest of Europe.

The organisation of the register was voluntary, but there were costs to the WSG in terms of postage and stationery. As the register became more complete, and the demand for more marking schemes grew, so the amount of correspondence involved increased. In 1983 new regulations were introduced (*WSG Bulletin* 38) and new charges were levied to cover administrative costs. Computerisation of the colour-marking register began in the early 1990s. The system is not yet fully operational, but computerisation has already improved the efficiency of the routine correspondence and provides the database for allocating ring combinations for new schemes and for tracing sightings.

## COLOUR-MARKING SCHEMES

As the register grew, progress has been made towards standardising the use of colour-rings, especially in individual combinations. The introduction of the "scheme identifier" demonstrates this. For example, with a single colour ring placed on one of the tibiae as the scheme identifier, the same combinations of colour rings on the

tarsi could be used for a number of projects. For some long-legged species such as Curlew *Numenius arquata*, rings identifying schemes are on the tarsus and those identifying individuals are on the tibia. When allocating schemes the minimum numbers of rings are used in an attempt to conserve combinations. There are, however, several species where the possibilities are nearly exhausted.

For waders, only PVC/Darvic rings are recommended. In the past acetate and celluloid rings have been used, but these fade after only a short time. All the colours tend towards a creamy-pink and this makes observations confusing and often useless. Nine colours of Darvic are used because they are easily described and relatively unlikely to be confused in field conditions. These colours, together with the metal numbered ring, form the basis of marking schemes. There are four ring positions, each of which might hold more than one ring, depending on the size of the bird - left or right leg, above ankle joint (above "knee", on "tibia") or below (on "tarsus").

A table giving suitable ring sizes for each species is available from the register. Tall rings can be useful for long-legged species which spend a lot of time in water or mud. Care should be taken to ensure that the rings do not interfere with the bird in any way. Darvic can also be used to make engraved rings. When two layers of different colours are sandwiched together, the outer layer can be cut away to reveal stripes, letters or numbers. These rings are only suitable for larger species, such as Oystercatchers and Avocets *Recurvirostra avosetta*. The use of flags and wing-tags requires special licensing and permission cannot be granted by the WSG alone.

The register currently contains details of 432 schemes for 35 species. Only 123 of these schemes are 'active', but sightings of longer-lived species from long-dead projects are still being reported. A standard registration fee (currently UK £5) is charged as a new scheme is set up, and a variable annual fee (minimum UK £5) is collected throughout the duration of the project. The amount of the annual fee is determined by the number of combinations allocated to the marking scheme, and is intended to cover the costs of handling sightings reported both during the period for which the annual fee is charged and subsequently.

Table 1 gives a rough breakdown of how many colour-marking schemes there are for each species and where they are based.

Table 1. Numbers of schemes registered, by species and region, as at May 1994.

Species	UK	Netherlands Belgium	Germany Denmark	Sweden Norway Finland	France	Spain Portuga I Italy	Austria Hungary Poland	Africa	Russia Taymyr
Oystercatcher	14	6	5	4	3	2	0	0	1
Black-winged Stilt	0	0	0	0	1	4	0	0	0
Avocet	4	3	3	0	2	2	1	1	0
Little Ringed Plover	3	1	0	2	0	2	1	0	0
Ringed Plover	14	1	4	6	1	1	2	0	5
Kentish Plover	2	1	1	1	4	8	1	0	0
Dotterel	3	0	0	1	0	1	0	0	3
Golden Plover	9	0	1	1	0	0	0	0	5
Grey Plover	1	2	2	0	1	0	0	1	8
Lapwing	21	2	3	3	1	0	0	0	0
Knot	4	0	2	1	1	1	0	0	4
Sanderling	3	0	2	1	1	0	0	1	5
Little Stint	0	1	2	1	0	0	0	0	8
Temminck's Stint	0	0	0	3	0	0	0	0	3
Curlew Sandpiper	0	0	1	0	1	1	0	2	6
Purple Sandpiper	12	1	2	4	0	1	0	0	1
Dunlin	8	0	5	5	1	3	1	0	4
Ruff	0	0	2	0	1	0	0	0	2
Black-tailed Godwit	7	2	4	2	0	0	0	0	0
Bar-tailed Godwit	1	3	3	1	1	1	0	0	1
Whimbrel	1	0	0	2	1	0	0	1	1
Curlew	8	5	5	3	1	1	0	0	0
Spotted Redshank	0	0	2	0	0	0	0	1	1
Redshank	12	1	3	1	1	0	1	0	0
Greenshank	4	0	3	0	0	0	0	1	0
Green Sandpiper	2	0	2	0	0	0	1	0	0
Wood Sandpiper	0	0	1	0	0	0	2	0	1
Common Sandpiper	9	0	0	1	0	0	0	0	0
Turnstone	8	2	1	1	1	0	0	1	7

Also other species: Collared Pratincole (1, Spain), Stone-curlew (1, UK; 1, Spain), Great Snipe (1, Norway), Snipe (1, UK; 1, Germany), Red-necked Phalarope (1, UK; 2, Russia), Grey Phalarope (1, Russia).

Notes:

- 1) All marking schemes are represented, although the majority are not now actively marking birds.
- 2) Marking schemes tabulated include those involving just single rings as site codes as well as more complicated ones in which birds are marked to identify them as individuals.
- 3) Area refers generally to the ringer and in some cases is not where the marking was taking place. Schemes operating in the Taymyr region of Siberia are listed separately.

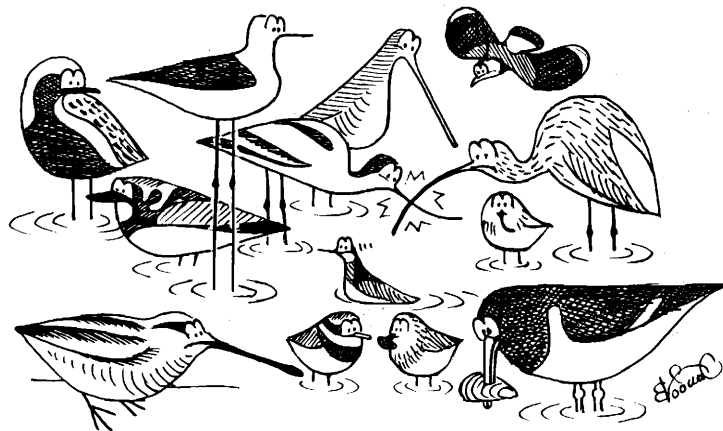


Table 2. Numbers of sightings reported for each species, and percentage traced, in relation to numbers of registered schemes, as at September 1993. Untraced sightings are those where the ringer has not yet been identified.

Species	Schemes registered	Sightings 1991-93	Percentage traced
Oystercatcher	33	93	82%
Black-winged Stilt	5	33	76%
Avocet	18	46	59%
Ringed Plover	29	45	62%
Kentish Plover	15	7	29%
Lapwing	32	13	62%
Knot	13	18	67%
Sanderling	12	133	93%
Curlew Sandpiper	10	17	82%
Purple Sandpiper	18	21	86%
Dunlin	24	53	60%
Black-tailed Godwit	14	15	60%
Bar-tailed Godwit	9	13	85%
Curlew	21	41	81%
Turnstone	19	73	82%

## SIGHTINGS

Sightings come to the register only when the finder does not know the origin of the bird. Up to 300 sightings are received each year, but not all the birds can be traced as individuals or even to a scheme. There are several reasons for this, the most common of which is the incomplete observation of ring combinations. Other factors affecting the ability to trace a bird are the fading or loss of colour rings (leading to ambiguous reports), unregistered schemes, the use of unauthorised combinations by schemes that have been registered, and possibly overlap between schemes on different flyways. Table 2 shows the numbers of schemes on the register for selected species and the success rates for tracing recent sightings.

All sightings are acknowledged. Many reports require extensive further correspondence in an attempt to establish the origin of the bird. Once a ringer has been sent details of an observation referring to a combination they have been allocated, they are required to supply the observer with as much information as possible. This co-operation is normally a condition of having a scheme registered, and may be called upon many years after birds have ceased to be marked. It is vital for the ongoing success of marking schemes that ringers safeguard the good relations we have with people reporting observations of marked waders.

Resulting data from sightings handled by the register belong both to the ringer and to the finder - no central record is kept. However, ringers should send details of birds traced as individuals to their national ringing schemes.

The probability of a marked bird being traced successfully depends partly upon the quality of the sighting. For larger species the rings tend to be more obvious but, since these birds are also often longer-lived, combinations are more likely to become incomplete or unreadable owing to loss or

wear. The success rates of tracing some species, for example Sanderling, reflects the fact that several researchers are currently both ringing birds and searching for sightings. The low sample of sightings received so far for Kentish Plover explains the apparently low success rate in tracing them. Most of the projects for this species have not been in operation for very long.

With the increased complexity of colour combinations, and the need for accuracy in descriptions of them by observers, it is important that potential observers should be made aware of the possible positions and colours that rings may take. A new colour-ring sighting report form has been devised which it is hoped will lead the observer through all the possibilities and result in a useful observation being recorded. A copy of this form is enclosed with this *Bulletin*. The form will also be sent to observers when sightings are acknowledged and when asking for further details of incomplete observations.

## UNTRACED BIRDS

Table 3 gives a list of untraced sightings. Did you ring these birds?

Details are given of ring combinations, date and place of sighting. If you are able to help in tracing any of these sightings please contact the WSG Colour-marking Register.

Table 3. The combinations are read as follows: Right tibia/tarsus; Left tibia/tarsus, e.g. O//R/M; //Y/W means orange on right tibia, red over metal on right tarsus; yellow over white on left tarsus. Colour codes - Red, Orange, Yellow, Green, Light green (Lime), Blue, Pale blue, Black (Niger), White, Metal

Ref	Species	Description	Date seen	Place seen
1	Oystercatcher	//; //G/W/N	10/92	Dyfed, UK
2	Oystercatcher	//G; //M	6/91	Elnesvaagen, Norway
3	Oystercatcher	//M; //Y/R	?	Cumbria, UK
4	Oystercatcher	//W/B; //W/M	12/91	W Glamorgan, UK
5	Oystercatcher	M//; //R/P	4/92	Devon, UK
6	Oystercatcher	//W/M; //	5/92	Dumfries, UK
7	Oystercatcher	//Y; //W/M	5/92	Dumfries, UK
8	Oystercatcher	//B; //M	3/92	Isle of Mull, UK
9	Oystercatcher	//Y/W; //	6/92	Argyll, UK
10	Oystercatcher	//M; //Y/P(L)	?/92	Tayside, UK
11	Oystercatcher	//G/Y; //M	3/93	Faroe Islands
13	Avocet	Y//; R//	4/92	Elmley, UK
14	Avocet	Y//; Y/N/R//	5/92	Ely, UK
16	Ringed Plover	//; //Y	7/92	Norfolk, UK
17	Ringed Plover	//M/L; N//N/W	12/90	France
19	Grey Plover	L//M; //	7/92	South Africa
20	Grey Plover	//R; //G	3/92	Mauritius
21	Lapwing	//N/W; //R/M	5/92	Cumbria, UK
22	Sanderling	//R/Y; Y//R/M	10/91	Orkney, UK
24	Dunlin	Y//R; //R	10/92	Norfolk, UK
26	Dunlin	pink/Y; pink	2/92	Guernsey, CI
27	Dunlin	//O; //O	3/92	Sussex, UK

28	Bar-tailed Godwit	//Y; Y/W//	11/92	Humberside, UK
29	Bar-tailed Godwit	G/R//; G/O//Y	12/92	Sylt, Germany
30	Bar-tailed Godwit	//; Y/W//	11/92	Zeeland, Belgium
31	Curlew	R//M; R//	8/86	Pontevedra, Spain
32	Curlew	R/Y//M; R/Y//	8/86	Pontevedra, Spain
32a	Curlew	N/R//M; R/N//	2/87	Pontevedra, Spain
32b	Curlew	R/Y//M; R//	2/87	Pontevedra, Spain
33	Curlew	//W; //W	5/93	Lothians, UK
35	Green Sandpiper	//; B/R//M	8/91	Herts, UK
36	Green Sandpiper	//R; //	7/93	Dorset, UK
39	Black-tailed Godwit	//; R//W(code)	10/93	Essex, UK
40	Avocet	R//; O//	9/93	Essex, UK
41	Dunlin	//R/Y; //	10/93	Sussex, UK
42	Black-winged Stilt	M/N//; Y/G//	4/93	Huelva, Spain
43	Dunlin	//Y/B; //	1/94	Essex, UK
45	Oystercatcher	M//; //Y/W	4/93	Dumfries, UK
46	Ringed Plover	M//; //R/Y	11/92	Essex, UK
47	Oystercatcher	//M; G/R//	6/93	Runde, Norway
48	Black-tailed Godwit	Y//R; //	3/94	Suffolk, UK
49	Curlew	N/P//M; N/P//	2/94	Devon, UK
50	Curlew	Y/L//M; Y/R//	8/93	Norfolk, UK
51	Knot	//R/O; //R/Y	2/94	Lanzarote, Spain
52	Common Sandpiper	//O; M//R	7/94	Lancaster, UK
53	Dunlin	Y//; //	4/94	Orkney, UK
54	Common Sandpiper	Y//; R/G/R//	7/94	Haverner, Germany

Care should also be taken in planning ahead for long-term projects. Amending existing marking schemes can be very difficult, especially where the original request was for relatively few combinations.

Finally, emphasis must be given to the importance of registering the scheme, rather than not doing so, and of using only combinations that have been authorised. For many of the more commonly marked species the chances are high that the use of unauthorised combinations will interfere with existing schemes and the results of both projects will be corrupted.

## THE FUTURE

The main priority for the register at present is the completion of the computerisation of all data about discontinued and current schemes. It is hoped that one of the benefits of this will be the possibility of identifying unused combinations from old schemes and re-allocating them for new projects. The success of this will depend largely on the quality of records kept by ringers. Another important venture is the further co-operation with organisations concerned with other flyways. Some contact has been made with the Asian/Pacific Flyway via the Asian Wetland Bureau, and these links must be strengthened, especially with the large increase in activity by European ringers in Siberia.

The success of the colour-marking register depends upon co-operation. This co-operation must be made to work smoothly not only between organisations, but also between ringers, other WSG members and the wader-watching public as a whole.

## SETTING UP A NEW SCHEME

Setting up a new colour-marking scheme requires careful thought. The increased demand for new marking schemes over the last few years means that for some species it will soon be impossible to find combinations that have not already been allocated. Before applying to the WSG, please consider whether or not the colour-marking can genuinely be justified in terms of furthering our knowledge of the species. Approval by the WSG is not automatic.

It is also important to allow plenty of time for registering a new scheme. Quite often, ringers planning expeditions allow far too little time and send a letter or fax along the lines that "the team of ringers is to leave next week and 100 combinations for 10 species are required now"! It is not always possible to deal with such a request in the time available. The colour-marking proposals deserve as much forward planning as any other element of an expedition, yet are often left to the last minute. Sometimes the ringers' reason for delay is that funds for the project might not materialise - but if this happens the reserved combinations can always be reallocated. Please apply early.

## COLOR-BANDS IN THE AMERICAS

Please see *Notes and News* elsewhere in this issue for an important notice concerning the co-ordination of color-banding schemes and resightings in the Americas.

