direction(s) for future research, monitoring and on-theground conservation actions by a growing cadre of Whimbrel aficionados.

Revising the Pan-American Shorebird Program

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International coordination of shorebird marking is essential to ensure reliable identification of individual shorebirds throughout their range. The Pan-American Shorebird Program (PASP) held a workshop at the Vth Western Hemisphere Shorebird Group meeting in Santa Marta, Colombia, where they presented a revised draft protocol for marking shorebirds in the Western Hemisphere.

The protocol is based on regional assignment of a single flag colour, thereby minimizing the risk of marking of smaller species that cannot safely wear two flags, promoting scientific integrity of results and reducing resighting errors in the field. The system is intended to be collaborative and adaptive to regional requirements as well as promote standards for marking, resighting and reporting.

Specifically:

- The Western Hemisphere would be divided into ten regions;
- Each region would be assigned a unique flag colour;
- Each country within a region would be assigned a unique band colour; and
- Each coloured flag would be engraved with a threedigit alphanumeric code using a standard set of 29 sans-serif font characters.

By marking shorebirds with one coded color flag and one plain color band, the region and country of banding origin can quickly be determined during resighting. Furthermore, using a set of 29 characters to code regionally coloured flags identifies the individual bird while allowing for 24,389 possible code combinations per species per region.

The workshop invited researchers who mark shorebirds in the Western Hemisphere to discuss the proposed marking protocol. Over 30 participants from ten different countries provided valuable feedback and input on the proposed changes. The response was generally positive: attendees saw this as an opportunity for collaboration and for new ways to become engaged. Challenges were identified, such as how to enforce the protocol, and how to ensure a sufficiently high level of coordination for the program to be effective.

A brief survey handed out as part of the workshop identified the importance of a coordinated marking protocol to ensure scientific integrity of results, given the interest in resighting data for birds marked in their own region as well as internationally. Not only did all respondents follow a resighting protocol for their own projects, they were actively resighting birds marked by others. However, the vast majority were using various combinations of flags and bands in marking their birds and not all researchers coordinated marking with others.

Although the PASP steering committee can provide guidance, set standards and protocols, and coordinate with other flyways, there is a great need for regional coordinators and species coordinators to take on an administrative role within each region. These indispensible volunteers would fulfill the crucial task of assigning and tracking coded flags, thereby acting as the relay between researchers and banding programs across all the countries in their region. The PASP needs your help to make the program as effective as possible. Please contact us if you are interested in volunteering or in being part of the consultation process as we draft a guidance document.

Conservation of Kentish Plovers in NW Europe: results of a workshop in N Germany

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Kentish Plovers are among the most threatened bird species breeding in coastal areas of NW Europe. Eighteen scientists and conservationists from France, The Netherlands, Germany and Denmark met for a workshop on this species in N Germany. The main goals of the workshop were to exchange information on recent conservation and research initiatives and to find out how the protection of the species can be improved. The workshop was held at the Michael-Otto-Institut im NABU in Bergenhusen, a research unit of BirdLife in Germany, from 18–19 September 2013. It was supported by the Ministry of Energy, Agriculture, the Environment and Rural Areas Schleswig-Holstein. The most important results of the workshop are summarized in Table 1 (page ??).

Breeding numbers of Kentish Plovers are regularly (in most cases annually) monitored across the area of concern ranging from Brittany/France to Denmark. In the central part of this area (The Netherlands and Lower Saxony/Germany)

negative trends are ongoing, but in recent years what are described as more positive trends have been observed in the west (Brittany) and north-east (especially Schleswig-Holstein/Germany). Most recent data indicate a total population of <500 breeding pairs in The Netherlands, Germany and Denmark and up to 200 pairs in Brittany. The breeding population in the Wadden Sea strongly declined in the long term (1987/88 to 2009/10) and short term (1998/99 to 2009/10) according to the Joint Monitoring Breeding Bird Group (2010).

Specific research efforts mainly took place in Brittany (starting 2007) and Schleswig-Holstein (starting 2009). These projects included colour-ringing of Kentish Plovers and investigations of reproductive success and causes of nest losses. Both projects revealed that most birds are site faithful to their breeding grounds but several exchanges between sites also occur. Open research questions include the reasons



Participants in the Workshop on the Conservation of Kentish Plovers held at the Michael-Otto-Institut im NABU in Bergenhusen, Germany, 18–19 September 2013.

why Kentish Plovers are absent from most Wadden Sea islands, and factors influencing hatching and breeding success (e.g. food supply and habitat characteristics).

Known threats to Kentish Plovers in the different countries/regions are mostly habitat loss and habitat deterioration due to limited coastal dynamics (e.g. reduced development of pioneer habitat), disturbance and trampling by tourists on beaches, and predation of nests or chicks by mammals or birds. Conservation efforts are being made in all countries and regions of concern, but such actions vary between countries and sites, depending on the kind of threats and other local circumstances (see Table 1). Measures that are at least locally effective include protective fencing against tourists (e.g. in combination with volunteer 'plover keepers' in Brittany), closing of large areas to the public and predator management. Habitat management in semi-natural areas is mainly based on vegetation management, e.g. reduction of vegetation height and density. Effective measures can be cattle grazing, mowing and temporal coverage with salt and fresh water. In The Netherlands, the ground at some sites has been experimentally covered with mussel shells or a layer of salt. In the Dutch Wadden Sea, there are plans to create an artificial sandy island and a new public awareness project. Examples of simple but effective measures are not removing flotsam from dikes to create local nesting habitat and not disturbing Barnacle Geese which can create nesting habitat by keeping vegetation short.

Workshop participants took part in excursions to three important Kentish Plover breeding sites on the Wadden Sea

coast of Schleswig-Holstein (Beltringharder Koog, foreland of St. Peter-Ording and Katinger Watt).

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Table 1. Existing and potential measures for the conservation of Kentish Plovers in NW Europe (Brittany, The Netherlands, Germany and Denmark) based on the results of the workshop.

Measure	Applied in	Effective?	Remarks	Source
Nest level				
Nest exclosures	Brittany	No	Potentially increased adult mortality	Talk by M. Huteau
	Lower Saxony (Germany)	Unknown	Enhanced hatching success in Common Ringed Plovers?	Talk by W. Daunicht
Breeding site level (predati	on, disturbance)			
Predator management (intense fox hunting in late winter)	Schleswig-Holstein (Germany), conservation polders	Yes	Absence of foxes and high breeding success in specific sub-areas ('peninsulas') in most years	Hötker <i>et al.</i> (2010) Cimiotti <i>et al.</i> (2012) Cimiotti <i>et al.</i> (2013)
Fencing of small colonies against mammalian predators	Not yet applied for Kentish Plovers	_	Partly successful in other ground-nesting birds, but difficult in coastal areas (electrical fences)	
Protective fencing against tourists	Brittany	Yes	Successful in combination with 'plover keepers' (see below)	Talk by M. Huteau
	Schleswig-Holstein (Germany), beaches	(No)	Successful in the past, breeding success now determined more by predation (St. Peter-Ording) or fencing is not effective (Sylt)	Hötker <i>et al.</i> (2010) Cimiotti <i>et al.</i> (2012) Cimiotti <i>et al.</i> (2013)
'Plover keepers' (volunteers) around fenced areas	Brittany	Yes	Enhanced breeding success	Talk by M. Huteau
Closing of (large) breeding areas to the public	Schleswig-Holstein (Germany), conservation polders	Yes	Nearly no disturbance by visitors for many years; high breeding numbers and high reproductive success in most years	Hötker et al. (2010) Cimiotti et al. (2012)
Habitat management				
Not removing flotsam from (asphalt) dikes	Schleswig-Holstein (Germany), conservation polders	Yes	Around ten pairs settled on the asphalt dike at atinger Watt	Hötker et al. (2010) Cimiotti et al. (2012)
Vegetation management by cattle grazing	Schleswig-Holstein (Germany), conservation polders	Yes	Increasing breeding numbers in grazed areas	Hötker et al. (2010) Cimiotti et al. (2012)
Vegetation management by mowing	Schleswig-Holstein (Germany), conservation polders	Yes	Increasing breeding numbers (only applied at Katinger Watt)	Hötker <i>et al.</i> (2010) Cimiotti <i>et al.</i> (2012)
Vegetation management by covering the ground with salt layer	The Netherlands	Unknown (potentially yes)	Positive effect on vegetation structure and Sandwich Terns colonies in Delta area	van Steenis & Poot (2013)
Vegetation management by covering the ground with layers of mussel shells	The Netherlands	Unknown (potentially yes)	Only possible in one area, positive for Pied Avocets	van Beusekom (2013)
Vegetation management by pumping salt water	The Netherlands	Unknown	Polders in Delta area	Talk by Jonna van Ulzen & Anne Voorbergen
	Schleswig-Holstein (Germany), conservation polders	(Yes)	Not yet specifically applied to Kentish Plovers, but large breeding numbers in 'salt water biotope' of Beltringharder Koog (sluices to the Wadden Sea, small tidal range)	Hötker et al. (2010) Cimiotti et al. (2012)
Vegetation management by retaining high levels of fresh water in winter/early spring	Schleswig-Holstein (Germany), conservation polders	Yes	Wet meadow areas within Beltringharder Koog and Rickelsbüller Koog offer suitable breeding habitat for Kentish Plovers, e.g. on muddy ground with pioneer vegetation	Hötker et al. (2010) Cimiotti et al. (2012)
No hunting/disturbance of Barnacle Geese	Schleswig-Holstein (Germany), conservation polders	Yes	Short vegetation (also) due to geese grazing offers suitable breeding habitat (locally even outside reserves)	Hötker et al. (2010) Cimiotti et al. (2012)
Creating artificial 'sand islands'	The Netherlands	Unknown	Planned for the Wadden Sea near the 'Afsluitdijk' by sand nourishments near a dam in the sea	Talk by Jonna van Ulzen & Anne Voorbergen
Public awareness				
Public awareness campaign	The Netherlands	Unknown	New project 'A haven for birds and people' started (Vogelbescherming Nederland and others)	Talk by Jonna van Ulzen & Anne Voorbergen