

# **Progress Report on Black-headed and Common Gull Colour-ringing Study, Lough Mask, County Mayo**

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## **Introduction**

Between 2006 and 2010 a colour-ringing study of both Common and Black-headed Gulls was carried out on Lough Mask, Co. Mayo, co-ordinated by the National Parks & Wildlife Service in conjunction with BTO ringing trainer, Chris Benson.

Lough Mask is designated as a candidate Special Protection Area (SPA 004062) for wild birds under EU Directive 79/409 and part of the site's qualifying interest is for breeding gulls. Both Common and Black-headed Gulls are listed as species of conservation concern due to their unfavourable conservation status in Europe and because their national breeding populations have declined by 25-50% in the last 25 years. Recent studies have added the Black-headed Gull in Ireland to the red list as its breeding range may have contracted by 95% between the periods 1968-72 and 1998-2002 and that its breeding population may have fallen by some 70% over the same period. The corresponding declines for Common Gull are also of concern. Lough Mask holds a significant percentage of the national breeding population for both species.

The initial aims of the study were to establish information on longevity, dispersal patterns, site fidelity, survival rates, etc. and to act as a mechanism for monitoring overall population trends. The colour-ringing component of the study ceases in 2010 and now the main focus will be to closely monitor fluctuations in breeding numbers, productivity, depredation, time budgets and the recruitment of colour-ringed birds back to the breeding colonies. The study also functions as part of the monitoring mechanism of the overall SPA designation.

## **Methods**

The study was confined to the ringing of pulli and was largely carried out on 2 separate colonies; Rams Island (M091599) for Common Gulls and an islet off Aghinish (M135665) for Black-headed Gulls. All ringed pulli were fitted with an engraved plastic ring in an attempt to improve the likelihood of a bird being reported. Each ring was engraved with a unique 4-digit code and each bird can therefore be identified in the field as an individual. These coded yellow rings have been fitted on the left tarsus with a corresponding BTO metal ring attached to the right tarsus.

The following colour-ring codes were used in the study;

<b>2006:</b>	201A-200A	Black-headed Gull	100
	. 201C-200C	Black-headed Gull	100
	. 201E-200E	Black-headed Gull	100
	. 201X-237X, 241X-250X, 261X-200X	Black-headed Gull	<u>87</u>
			387
	201Z-282Z	Common Gull	82
<b>2007:</b>	238X-240X, 251X-260X	Black-headed Gull	13
	201H-200H	Black-headed Gull	100
	201M-200M	Black-headed Gull	100
	201P-200P	Black-headed Gull	100
	201S-200S	Black-headed Gull	<u>100</u>
			413
	283Z-290Z	Common Gull	8
	201V-200V	Common Gull	<u>100</u>
			108
<b>2008:</b>	201B – 200B	Black-headed Gull	100
	201D – 200D	Black-headed Gull	100
	201F – 271F	Black-headed Gull	<u>71</u>
			271
	201Y – 271Y	Common Gull	71
<b>2009:</b>	272F – 200F	Black-headed Gull	29
	201G – 200G	Black-headed Gull	<u>100</u>
			129
	272Y – 288Y	Common Gull	17
<b>2010:</b>	289Y – 200Y	Common Gull	12
	291Z – 200Z	Common Gull	<u>10</u>
			22
<b>Total:</b>		Black-headed Gull	1200
		Common Gull	300

## **Discussion:**

To date (14/09/10) 540 re-sightings of 176 post-fledged gulls have been submitted – these were made up of 359 re-sightings of 113 individual Black-headed Gulls and 181 re-sightings of 63 individual Common Gulls.

Away from the breeding colonies all 137 re-sightings of 48 Common Gulls received to date have been coastal and have occurred between Killala Bay and Tralee Bay, within 160km of the breeding site, in a mainly west to south direction. This represents 16.7% of all Common Gull pulli ringed to 2009. To date it appears that dispersal is heavily concentrated along the South Galway and Clare coastlines. Although this colony is near the southern extremity of its breeding range the lack of any re-sightings north of County Mayo may indicate that Common Gulls breeding in western Ireland are separate from the metapopulation based in western Scotland.

331 re-sightings of 95 Black-headed Gulls away from the breeding colony have occurred over a broader front and at greater distances (7 individuals have been re-sighted in Spain up to 1650km from their natal colony) than Common Gulls but still indicate a mainly southerly dispersal pattern. This represents 7.9% of all Black-headed Gull pulli ringed to 2009 and is considerably lower than that received for Common Gulls. This may imply that a significant proportion of Black-headed Gulls are dispersed in areas that are at present under recorded or that their behaviour or habitat preferences make them more difficult to scope. It may also indicate greater mortality during the post-fledging period.

Both Black-headed and Common Gulls are known to be generally faithful to their natal site and do not mature until their 2<sup>nd</sup> or 3<sup>rd</sup> year respectively. To date 25 Common Gulls ringed as pulli have been recorded as adults during the breeding season on Lough Mask. This represents 8.7% of pulli ringed until 2009. Over the same period 23 adult Black-headed Gulls ringed as pulli were recorded back at their natal colony that represents only 1.9% of pulli ringed until 2009. The disparity in these figures may indicate that Common Gulls are experiencing higher post-fledging survival rates or that they are displaying a greater fidelity towards their natal site. The high vegetation and low outline of the Black-headed Gull colony also makes observance of colour-ringed birds much more difficult at this site. The observance of two Black-headed Gulls at the breeding colony that were previously re-sighted in NW Spain indicates that a proportion of this population are capable of dispersing long distances from their natal colony before returning as breeding adults.

The colour-ringing component of the project was concluded during the 2010 breeding season and it is hoped that further re-sightings of individually marked birds over the coming years will allow sufficient data to be collated in a final report. Initial findings indicate that post-fledging dispersal for both species occurs largely in western and southern Ireland but that a small proportion of Black-headed Gulls disperse much greater distances. Individuals from both species have shown strong fidelity to wintering sites in consecutive years. Some adult Common Gulls have returned to breeding sites on Lough Mask other than their natal colonies. The apparent disparity in survival rates between the two species is not yet readily explainable.

## Acknowledgments:

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All further re-sightings will be gratefully received and may be submitted to either Eoin Mc Greal ([eoin.mcgreal@environ.ie](mailto:eoin.mcgreal@environ.ie)) or Chris Benson ([illaune@eircom.net](mailto:illaune@eircom.net)).

## Selected Recaptures

### Black-headed Gull

Ring Number	Age/ Type	Capture	Date	Init	Details
EL75617	N	1	31/05/06	EM	lough mask (unnamed) island, Mayo
(217C)	S	5 Sighted	12/01/09	MS	Bray Harbour, Wicklow
	S	5 Sighted	03/07/10	SME	Kilcoole, Co. Wicklow
EL75556	N	1	31/05/06	DMC	lough mask (unnamed) island, Mayo
(256A)	S	5 Sighted (R)	07/02/07	MC	Sligo Town (90 km, NE, 252 days)
	S	5 Sighted	08/04/07	MD	Galway Docks (44 km, SSE, 312 days)
	S	5 Sighted	21/08/07	MD	Galway Docks (44 km, SSE, 1 yr 82days)

EL75795 <b>(255X)</b>	N	1		04/06/07	EM	lough mask (unnamed) island, Mayo
	S	3	Sighted	12/10/07	RM	The Lough, Cork (201 km, SSE, 130 days)
	S	3	Sighted	25/11/07	RM	The Lough, Cork (201 km, SSE, 174 days)
	S	3	Sighted	01/12/07	RM	The Lough, Cork (201 km, SSE, 180 days)
	S	5	Sighted	20/02/08	MK	The Lough, Cork (201 km, SSE, 261 days)
	S	5	Sighted	30/03/08	HH	The Lough, Cork (201 km, SSE, 290 days)
	S	2	Sighted	28/05/09	EM	lough mask (unnamed) island, Mayo
	S	2	Sighted	26/01/10	KP	The Lough, Cork
	S	2	Sighted	08/03/10	KP	The Lough, Cork
EW25518 <b>(218H)</b>	N	1		04/06/07	EM	lough mask (unnamed) island, Mayo
	R	1	Recaptured	10/06/07	IO	lough mask (unnamed) island,
	S	5	Sighted	03/05/08	EGR	Pontevedra, Spain (1245 km, S, 334 days)
	S	2	Sighted	28/05/09	EM	lough mask (unnamed) island, Mayo
EW25630 <b>(230M)</b>	N	1		10/06/07	EM	lough mask (unnamed) island, Mayo
	S	2		30/05/09	EM	lough mask (unnamed) island, Mayo
	S	2		02/06/09	EM	lough mask (unnamed) island, Mayo
	S	2		10/01/10	MF	Quilmas, Galicia, Spain
	S	2		21/03/10	MF	Quilmas, Galicia, Spain
EW25730 <b>(230P)</b>	N	1		16/06/07	EM	lough mask (unnamed) island, Mayo
	S	2	Sighted (R)	19/11/07	AC	Pontevedra, Spain (1263 km, S, 156 days)
	S	2	Sighted (R)	01/12/07	AC	Pontevedra, Spain (1263 km, S, 168 days)
	S	2	Sighted (R)	20/04/08	AC	Pontevedra, Spain (1263 km, S, 308 days)
	S	2	Sighted (R)	06/10/08	JM	Ennis, Co. Clare (98 km, S, 473 days)
	S	2	Sighted (R)	10/11/08	JOM	Pontevedra, Spain (1263 km, S, 508 days )
	S	2	Sighted (R)	24/01/09	AC	Pontevedra, Spain (1263 km, S, 584 days )
EW25832 <b>(232S)</b>	N	1		21/06/07	EM	lough mask (unnamed) island, Mayo
	S	2	Sighted	30/12/08	LJ	Lugo, Spain ( 1200 km, S, 568 days)
	S	2	Sighted	05/01/09	CG	Lugo, Spain ( 1200 km, S, 573 days)
	S	2	Sighted	18/01/09	LJ	Lugo, Spain ( 1200 km, S, 586 days)
	S	2	Sighted	08/02/09	LJ	Lugo, Spain ( 1200 km, S, 606 days)
	S	2	Sighted	02/06/09	EM	lough mask (unnamed) island, Mayo
EW25844 <b>(244S)</b>	N	1		21/06/07	EM	lough mask (unnamed) island, Mayo
	S	5	Sighted	26/03/09	AW	North Slob, Wexford (238 km, SE, 272 days)
	S	2	Sighted	02/06/09	EM	lough mask (unnamed) island, Mayo
	S	2	Sighted	28/06/10	EM	lough mask (unnamed) island, Mayo
EW67052 <b>(252B)</b>	N	1		06/06/08	EM	lough mask (unnamed) island, Mayo
	S	2	Sighted	05/01/10	ST	Swanpool Lake, Falmouth, Cornwall

## Common Gull

EL75718	N	1		03/06/06	EM	Rams Island, Mayo
<b>(218Z)</b>	S	3	Sighted	15/10/07	MD	Galway Docks (38 km, SSE, 72 days)
	S	2	Sighted	30/04/09	EM	Rams Island, Mayo
EL75732	N	1	03/06/06	EM		Rams Island, Mayo
<b>(232Z)</b>	S	2	Sighted	26/12/07	MD	Quilty, Clare (83 km, S, 1 yr 206days)
	S	2	Sighted	30/04/09	EM	Long Rock, L. Mask , Mayo
EL75752	N	1		14/06/06	EM	Rams Island, Mayo
<b>(252Z)</b>	S	3	Sighted	28/07/06	MD	Galway Docks (38 km, SSE, 44 days)
	S	3	Sighted	30/07/06	MD	Waterside, Galway (38 km, SSE, 46 days)
	S	3	Sighted	01/08/06	MD	Waterside, Galway (38 km, SSE, 48 days)
	S	3	Sighted	11/08/06	MD	Galway Docks (38 km, SSE, 58 days)
	S	3	Sighted	18/08/06	MD	Galway Docks (38 km, SSE, 65 days)
	S	3	Sighted	04/09/06	MD	Galway Docks (38 km, SSE, 82 days)
	S	3	Sighted	09/09/06	MD	Waterside, Galway (38 km, SSE, 87 days)
	S	3	Sighted	08/11/06	MD	Galway Docks (38 km, SSE, 147 days)
	S	5	Sighted	23/01/07	MD	Waterside, Galway (38 km, SSE, 223 days)
	S	2	Sighted	21/04/07	MD	Galway Docks (38 km, SSE, 311 days)
	S	2	Sighted	16/07/07	TC	Galway Docks (38 km, SSE, 1 yr 32days)
	S	2	Sighted	28/09/07	EM	Waterside, Galway (38 km, SSE, 1 yr 106days)
	S	2	Sighted	10/10/07	EM	Galway Docks (38 km, SSE, 1 yr 118days)
	S	2	Sighted	28/02/08	MD	Waterside, Galway (38 km, SSE, 1 yr 259days)
	S	2	Sighted	31/07/08	MD	Waterside, Galway (38 km, SSE, )
	S	2	Sighted	30/05/09	EM	Rams Island, Mayo
EW26000	N	1		04/06/07	EM	Rams Island, Mayo
<b>(200V)</b>	S	2	Sighted	05/08/09	DB	Bunlough Strand, Louisburgh, SW Mayo
	S	2	Sighted	30/05/09	EM	Rams Island, Mayo
	S	2	Sighted	22/07/09	EM	Bunowen, SW Mayo
EW25955	N	1		16/06/07	EM	Rams Island, Mayo
<b>(255V)</b>	S	3	Sighted	11/08/07	PL	Rusheen, Galway (38 km, SSE, 56 days)
	S	3	Sighted	13/10/07	MD	Quilty, Clare (83 km, S, 119 days)
	S	2	Sighted	15/07/09	AOD	Rusheen, Galway (38 km, SSE, 56 days)
EW25991	N	1		24/06/07	AB	Rams Island, Mayo
<b>(291V)</b>	S	5	Sighted	16/07/08	DMN	Quilty, Clare (83 km, S, 1 yr 22days)
	S	2	Sighted	13/06/09	EM	Rams Island, Mayo
	S	2	Sighted	26/06/09	EM	Dooghmakeown, SW Mayo

