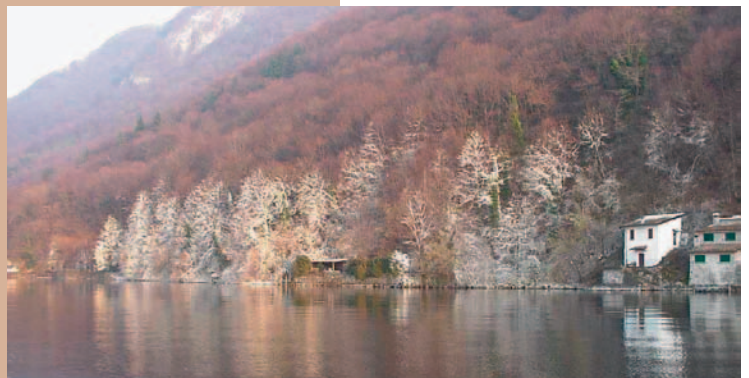
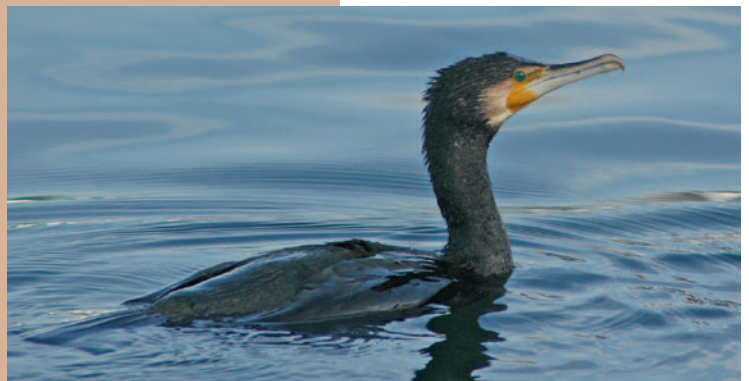


Number and distribution of Great Cormorants *Phalacrocorax carbo* in Switzerland in January 2009

Verena Keller
Marcel Burkhardt



Pan European Cormorant midwinter
census 2009 - national report for Switzerland



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Summary

In January 2009, the Wetlands International Cormorant Research Group launched a coordinated European census of Great Cormorants in winter, the second after 2003. This report presents the results of the roost counts of Great Cormorants in Switzerland. In total, 2784 Cormorants were counted in Switzerland, 6016 if the roosts across the borders to adjacent countries are included. Overall, 43 occupied roosts were found, 34 of which were in Switzerland. The number of roosts was smaller than in 2003, as in 2009 many small lakes were frozen. The total number of Cormorants was slightly higher than in 2003, when 5885 were counted, but lower if only the roosts on Swiss territory are considered (4201 individuals in 2003).

Zusammenfassung

Im Januar 2009 organisierte die Arbeitsgruppe Kormoran von Wetlands International zum zweiten Mal nach 2003 eine gesamteuropäische Zählung der Kormorane im Winter. Dieser Bericht stellt die Resultate der Schlafplatzzählungen der Kormorane in der Schweiz zusammen. Insgesamt wurden in der Schweiz 2784 Kormorane erfasst, 6016 unter Einbezug der grenznahen Schlafplätze im Ausland. Sie verteilten sich auf total 43 besetzte Schlafplätze, 34 davon in der Schweiz. Die Zahl der besetzten Schlafplätze war kleiner als 2003, da viele kleine Seen gefroren waren. Der Winterbestand des Kormorans war etwas höher als in 2003, als 5885 Kormorane gezählt wurden, aber kleiner, wenn nur die auf Schweizer Territorium liegenden Schlafplätze berücksichtigt werden (4201 Individuen 2003).

Résumé

En janvier 2009, le groupe de recherche Cormorans de Wetlands International organisa pour la deuxième fois depuis 2003 un recensement européen des Grands Cormorans. Le rapport présente les résultats des recensements aux dortoirs des Grands Cormorans en Suisse. Au total, 2784 Grands Cormorans ont été comptés en Suisse, 6016 si les dortoirs frontaliers des pays voisins sont inclus. Les Cormorans étaient répartis en 43 dortoirs, dont 34 étaient situés en Suisse. Le nombre de dortoirs était inférieur à celui de 2003, en raison du fait que beaucoup de petits lacs étaient gelés. La population hivernale du Grand Cormoran était un peu plus haut qu'en 2003, quand 5885 Cormorans étaient comptés, mais inférieur si seulement les dortoirs sur territoire suisse sont considérés (4201 individus en 2003).

Riassunto

Nel gennaio 2009, il gruppo di ricerca Cormorani di Wetlands International ha organizzato per la seconda volta dal 2003 un censimento europeo dei Cormorani. Questo rapporto presenta i risultati dei censimenti ai dormitori dei Cormorani in Svizzera. Un numero totale di 2784 Cormorani è stato contato in Svizzera, 6016 includendo i dormitori nelle regioni di confine con i paesi vicini. I Cormorani erano distribuiti su 43 dormitori, di cui 34 situati in Svizzera. Il numero di dormitori era inferiore a quello del 2003, poiché molti dei piccoli laghi erano ghiacciati. La popolazione invernale del Cormorano era un po' più alta che nel 2003, quando erano stati contati 5885 individui, ma inferiore se si considerano solo i dormitori su territorio svizzero (4201 individui in 2003).

1. Introduction

The increase of the European population of Great Cormorants *Phalacrocorax carbo* has led to widespread conflicts with fisheries. It is therefore important to document the development of both breeding and wintering populations. The Wetlands International Cormorant Research Group organised pan-European censuses of Cormorants in winter (2003; Keller & Burkhardt 2003) and during the breeding season (2006). Detailed publications of these results are still lacking but the overall figures have been published in a leaflet (available at the Website of the Cormorant Research Group: <http://web.tiscali.it/sv2001/index.htm>; accessed 15 February 2010). In order to get an update on the population size, the Cormorant Research Group organised another coordinated census in January 2009. An information leaflet and recording forms were sent out to the national coordinators of the 2003 census.

In Switzerland, overall Cormorant numbers are usually taken from the waterbird census and presented in the annual waterbird reports (e.g. Keller & Burkhardt 2010). Since 1995, counters can report figures separately for day-time counts and roost counts. Previous problems due to a mixture of counting methods have largely been eliminated. Figures from earlier counts have been checked carefully for analyses of the data for the publications on population size and trend of Cormorants in Switzerland (Suter 1989, Schifferli et al. 2005).

In this report, the emphasis is laid again on roost counts. Data are compiled to comply with the requirements of the European census.

2. Organisation of the census in 2009

The European Cormorant census was organised by the coordinators of the national waterbird census at the Swiss Ornithological Institute in Sempach, Verena Keller and Marcel Burkhardt. It was coordinated with the waterbird census in mid-January, which was carried out on the weekend of 15/16 January 2009. Waterbird counters are generally encouraged to count and record Cormorants separately at their night roosts. No special recording forms were distributed, as the information on the European census was sent to national coordinators only in December 2008.

Almost all known night roosts of Great Cormorants were covered. For some lakes we did not receive any information whether a specific night count had been carried out. However, counters indicated that the lakes were completely frozen which makes it very unlikely that Cormorants would use a roost there.

In the Bodensee (Lake Constance) region the "Ornithologische Arbeitsgemeinschaft Bodensee" (OAB), which coordinates the waterbird census in the Swiss, German and Austrian parts of this cross-border site, informed the counters about the roost counts and made the results available to us.

In addition to the roosts on Swiss territory, several roosts across the borders to the neighbouring countries were counted, as these areas are traditionally included in the Swiss waterbird census. The results of these counts are presented as well. Where roosts were situated right on or very close to the border, roosts were assigned to only one country to avoid double-recording for the national totals.

3. Results and discussion

In total, 2784 Cormorants were counted in Switzerland, 6016 if the roosts across the borders to Germany, Austria, Italy and France are included (Table 1, 2). The total, including roosts across the borders, was slightly higher than in 2003, when 5885 Cormorants were counted. Overall, the wintering population has shown no trend since 2003 (Fig. 2). However, the distribution has shifted. The number of Cormorants recorded south of the Alps has increased in recent years, in particular on Lago di Lugano/Ceresio. The roost at Crotti, Ramponio in Italy, close to the Swiss border near Gandria, has become the largest roost in recent years. The roost at Les Grangettes on Lac Léman, which used to be the largest in Switzerland, has lost its importance. Overall numbers on Lac Léman amounted to only about 50 % of those in 2003.

Overall, 43 occupied roosts were found, 34 of which were in Switzerland. The number of roosts was considerably smaller than in 2003, when 60 roosts were occupied, 43 of them in Switzerland. This difference is partly due to the fact that in 2009 many of the smaller lakes in Switzerland were frozen. It cannot be excluded that some roosts have been overlooked although it is unlikely that roosts with large numbers of Cormorants would have remained undetected.

58 % of roosts, holding 89 % of Cormorants, were situated on lakes, the rest on rivers.

The number of Cormorants counted during the day census was relatively close to the roost count total. Overall, 5535 Cormorants were counted in Switzerland and the border lakes Bodensee and Lac Léman (Keller & Burkhardt 2010), vs 6016 at the roosts. On individual lakes the largest differences arose on Ceresio/Lago di Lugano, where only 866 Cormorants, less than half of the number counted at the roost were counted during the day, but the Italian part of the lake is not included in the day-time total.

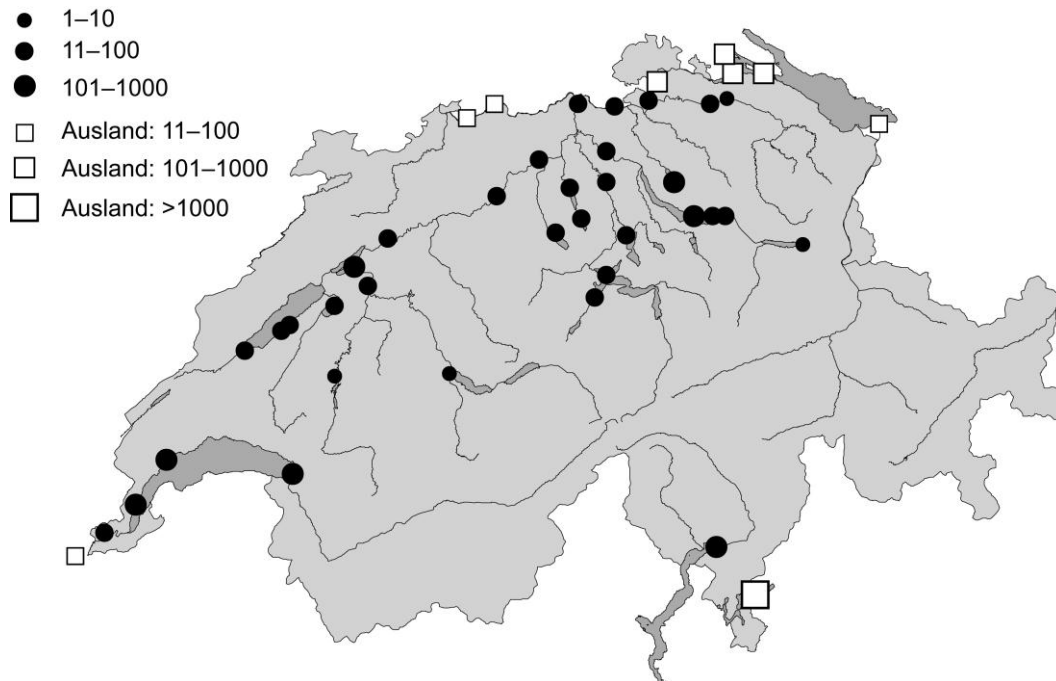


Fig. 1. Distribution of Great Cormorant roosts in Switzerland and along its borders in January 2009. "Ausland": Roosts outside Swiss territory.

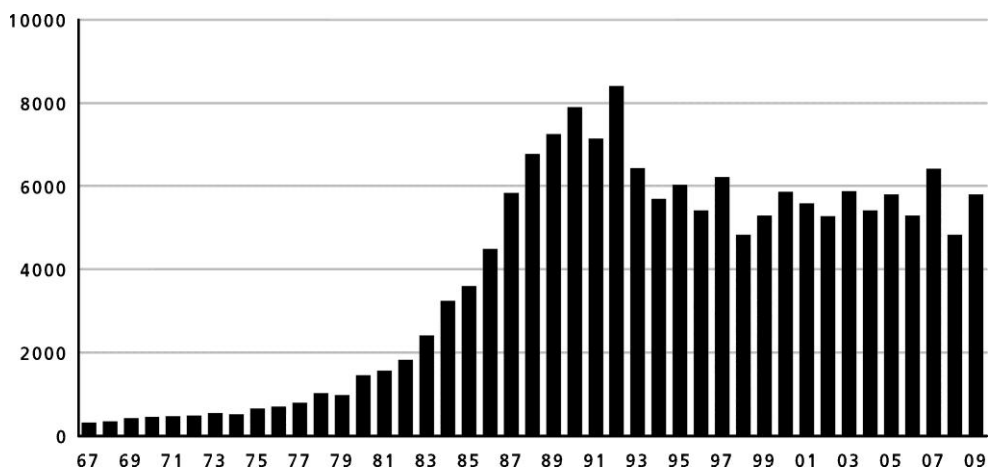


Fig. 2. Numbers of Great Cormorants in January for Switzerland, foreign parts of Bodensee and Lac Léman included. 1967–2002: Schifferli et al. (2005); 2003–2009: national waterbird census (day counts).

Table 1. Number of roosts and of Great Cormorants on different lakes and rivers.

Lake/river	Occupied roosts 2009	Location of roost (habitat)	Cormorants 2003	Cormorants 2009
Ceresio/Lago di Lugano	I 1	Lake	650	2409
Lac Léman	CH 3	Lake	1637	864
Bodensee (Untersee)	D 3	Lake	562	544
Hochrhein	CH 2, D 3	River	356	353
Zürichsee	3	Lake	242	380
Verbano/Lago maggiore	CH 1	Lake	235	220
Bielersee	1	Lake	129	211
Aare	5	River/Reservoir (dammed river)	395	173
Lac de Neuchâtel	3	Lake	82	164
Greifensee	1	Lake	78	114
Zugersee	1	Lake	97	95
Lac de Morat	-	Lake	650	95
Sempachersee	1	Lake	61	82
Vierwaldstättersee	2	Lake	56	71
Rhône	CH 1, F 1	Reservoir (dammed river)	109	67
Bodensee (Obersee)	A 1	Lake	240	50
Reuss	1	Reservoir (dammed river)	32	23
Hallwilersee	1	Lake	-	22
Limmat	1	River	42	21
Thur	2	River	9	20
Baldeggersee	1	Lake	18	17
Thunersee	1	Lake	3	9
Saane / Sarine	1	Reservoir (dammed river)	40	8
Walensee	1	Lake	12	4
Alpenrhein	-	River	64	0
Lauerzersee	-	Lake	28	0
Seebachtal TG	-	Small lakes	26	0
Lac de Divonne	F -	Lake	10	0
Mauensee	-	Lake	6	0
Inkwilersee	-	Small lake	5	0
Canal de la Broye	-	Canal	5	0
Aegerisee	-	Lake	3	0
Lac de Seedorf	-	Small lake	3	0
Number on lakes	26 (CH 21, A 1, D 3, I 1)		4833	5351
Number on rivers/reservoirs	17 (CH 13, D 3, F 1)		1052	665
Total number Switzerland			4201	2784
Total number Switzerland	roosts across borders included		5885	6016

Table 2. List of Great Cormorant roosts in Switzerland and along its borders occupied in January 2009.

Lake/river	Name of roost	Country	Canton (Bundesland, Département, Regione)	Swiss grid reference		Longitude (degrees, minutes)		Latitude (degrees, minutes)		Location of roost (habitat)	Date	Number of Cor- morants	Counter
Bodensee (Obersee)	Fussacher Bucht	A	Vorarlberg	767	263	9	39.3	47	29.8	Lake - shore	17.1.	50	D. Bruderer
Bodensee (Untersee)	Stockacher Aach-Mündung	D	Baden- Württemberg	719	296	9	1.6	47	48.2	Lake - shore	17.1.	0	H. Werner
Bodensee (Untersee)	Wollmatinger Ried - Seerhein	D	Baden- Württemberg	726	281	9	7.0	47	40.1	Lake/river - shore	18.1.	238	H. Jacoby
Bodensee (Untersee)	Radolfzeller Aachried	D	Baden- Württemberg	712	288	8	55.9	47	44.0	Lake - shore	17.1.	180	H. Bromberger
Bodensee (Untersee)	Gaienhofen-Hemmenhofen	D	Baden- Württemberg	715	281	8	58.3	47	40.4	Lake - shore	20.1	126	J. Marschner
Hochrhein	Rüdlingen, Alter Rhein	CH	SH	685	271	8	34.1	47	35.1	River - island	17.1.	80	K. Wanner
Hochrhein	Rheinau-Altenburg, Greut	D	Baden- Württemberg	688	278	8	36.6	47	38.8	River - shore	18.1.	116	J. Frey
Hochrhein	Kaiserstuhl	CH	AG	673	269	8	24.5	47	34.1	River - shore	17.1.	64	W.Müller
Hochrhein	Rhein Wyhlen D, NSG Altrhein	D	Baden- Württemberg	620	265	7	42.3	47	32.1	River - island	17.1.	68	M. Leuzinger
Hochrhein	Riburg/Schörstadt	D	Baden- Württemberg	630	270	7	50.1	47	35.1	River - shore	18.1.	25	L. Meier Frei- burghaus
Thur	Warth, Ittingen	CH	TG	707	270	8	52	47	34	River - shore	18.1.	16	A. Schmid
Thur	Pfyn, Eggenrain	CH	TG	713	272	8	56.5	47	35.3	River - shore	17.1.	4	W. Geiger
Greifensee	Maur, Fluh	CH	ZH	694	242	8	40.9	47	19.3	Lake - shore	16.1.	114	H.U. Dösseg- ger
Walensee	Walenstadt, Insel Bommerstein	CH	SG	740	220	9	17.0	47	7.0	Lake - island	17.1.	4	R. Noser
Zürichsee	Linthmündung	CH	SZ	713	230	8	56.2	47	13.5	Lake - island	17.1.	58	K. Robin
Zürichsee	Kloster Wurmsbach	CH	SG	708	230	8	51.9	47	12.7	Lake - shore	18.1.	62	K. Anderegg
Zürichsee	Ufenau	CH	ZH	701	230	8	46.3	47	12.8	Lake - island	18.1.	260	E. Horath
Limmat	Spreitenbach, Chessel	CH	ZH	670	253	8	22.0	47	25.4	River - island	18.1.	21	K. Wiederkehr
Zugersee	Risch	CH	ZG	677	223	8	27.2	47	9.2	Lake - shore	18.1.	95	A. Zimmer- mann
Vierwaldstättersee	Meggenhorn	CH	LU	670	209	8	21.5	47	01.6	Lake - island	17.1.	47	G. Bachmann
Vierwaldstättersee	Alpnachersee	CH	OW	666	201	8	18.3	46	57.4	Lake - shore	17.1.	24	S. Trinkler
Reuss	Flachsee Unterlunkhofen	CH	AG	670	242	8	21.9	47	19.5	Reservoir (dam- med river) - island	18.1.	23	A. Ingold
Baldeggersee	Stäfligen	CH	LU	661	229	8	14.6	47	12.5	Lake - shore	18.1.	17	W. Sager
Hallwilersee	Riesle	CH	AG	657	240	8	11.5	47	18.5	Lake - shore	18.1.	22	R. Berner

Lake/river	Name of roost	Country	Canton (Bundesland, Département, Regione)	Swiss grid reference		Longitude (degrees, minutes)		Latitude (degrees, minutes)		Location of roost (habitat)	Date	Number of Cor- morants	Counter
Sempachersee	Sursee, Gamma-Insel	CH	LU	652	224	8	7.5	47	9.9	Lake - island	19.1.	82	M. Burkhardt
Thunersee	Gwatt, Insel Bonstetten	CH	BE	614	174	7	37.3	46	43.0	Lake - island	18.1.	9	M. Gerber
Aare	Stausee Niederried	CH	BE	585	205	7	14.5	46	59.8	Reservoir (dammed river) - shore	17.1.	11	B. Mäder
Bielensee	Hagneck	CH	BE	580	212	7	10.5	47	3.5	Lake - shore	18.1.	211	D. Trachsel
Aare	Häftli	CH	BE	592	222	7	20.0	47	8.9	River - shore	17.1.	12	A. Blösch
Aare	Rothrist Hungerzelg / Boningen	CH	AG	631	237	7	50.9	47	17.0	River - shore	14.1.	29	B. Rüegger
Aare	Telli/Aarau, Zurlindeninsel	CH	AG	646	250	8	2.9	47	24.0	River - island	17.1.	32	W. Holliger
Aare	Klingnauer Stausee	CH	AG	660	270	8	14.2	47	34.7	Reservoir (dam- med river) - shore	17.1.	89	M. Güntert
Saane / Sarine	Lac de la Gruyère, Rossens	CH	FR	573	173	7	5.1	46	42.5	Reservoir - shore	18.1.	8	C. Perroud
Lac de Neuchâtel	Forel	CH	FR	557	191	6	52.5	46	52.1	Lake - artificial structures	18.1.	74	P. Rapin
Lac de Neuchâtel	Estavayer-le-Lac	CH	FR	554	189	6	50.5	46	51.3	Lake - artificial structures	18.1.	15	P. Rapin
Lac de Neuchâtel	Champ Pitett	CH		541	182	6	40.2	46	47.2	Lake - island	18.1.	75	J. C. Muriset
Lac de Morat	Guévoz (Vallamand)	CH	VD	573	198	7	5.0	46	56.0	Lake - shore	25.1.	95	P. Monney
Lac Léman	Les Grangettes	CH	VD	558	138	6	53.6	46	23.5	Lake - island	17.1.	451	O. Epars
Lac Léman	Bursinel	CH	VD	513	143	6	18.4	46	26.0	Lake - shore	17.1.	281	F. Mathey
Lac Léman	Versoix- Prévorsier	CH	VD	502	127	6	10.0	46	17.2	Lake - shore	17.1.	132	E. Wiseman
Rhône	Verbois/Aire-la-Ville	CH	GE	491	117	6	1.6	46	11.7	Reservoir (dam- med river) - shore	18.1.	47	B. Lugrin
Rhône	Etournel	F	Ain	484	109	5	56.3	46	7.4	Reservoir (dammed river)	11.1.	20	B. Piot
Verbano/Lago maggio- re	Bolle di Magadino	CH	TI	709	112	8	51.0	46	9.0	Lake - shore	17.1.	220	M. Inselmini
Ceresio/Lago di Lugano	Crotti, Ramponio (near Gandria TI)	I	Lombardia	723	95	9	1.6	45	59.7	Lake - shore	19.1.	2409	G. Bonomi
Total Switzerland												2784	
Total Switzerland (roosts across borders included)												6016	

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