Breeding colonies of Great Cormorants *Phalacrocorax carbo* in Switzerland in 2012

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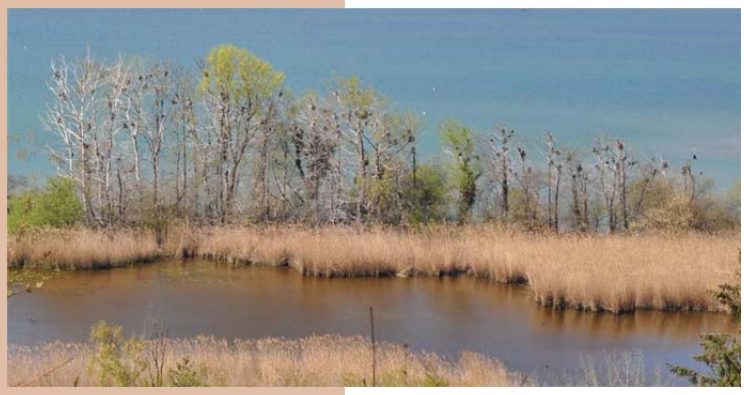

Western Palearctic census of breeding Cormorants 2012
National report for Switzerland

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Breeding Colonies of Great Cormorants *Phalacrocorax carbo* in Switzerland 2012

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Great Cormorant, Colony at Champ-Pittet: Verena Keller

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Summary

In Switzerland, the breeding population of Great Cormorants has been monitored since the first broods were observed in 2001. This report presents the results of the count in 2012, which were integrated into the coordinated Cormorant census in the Western Palearctic. Overall, 1037 Cormorant nests in 13 colonies were recorded in 2012. The two sites Stausee Niederried and Alpnacherried, where a few Cormorants have been recorded irregularly in Grey Heron colonies, were not occupied. Cormorants were found nesting at three new sites, two of which (Sempachersee and Mauensee) with a couple of nests only. On the third site, Les Grangettes on Lake Geneva, 81 pairs established two sub-colonies, the highest number of nests so far in the first year of a colony's existence. The two largest colonies, Fanel and Champ-Pittet, both situated on Lake Neuchâtel, hold over 50 % of the national population. The overall number of nests has increased markedly since 2011 but not all colonies continued to increase. Small colonies in particular showed only small increases (Greifensee, Amsoldingersee) or declined (Baldeggersee).

Zusammenfassung

Die Brutpopulation des Kormorans in der Schweiz wird seit den ersten Bruten 2001 alljährlich gezählt. Dieser Bericht präsentiert die Resultate der Zählung 2012, die ebenfalls Teil der koordinierten Kormoranzählung der Kormorane in der Westpaläarktis war. Insgesamt wurden für das Jahr 2012 1037 Nester gezählt. Die zwei Brutorte Stausee Niederried und Alpnacherried, wo einzelne Kormoranpaare nicht alljährlich in Graureiherkolonien gebrütet haben, waren nicht besetzt. An drei neuen Orten wurden Kormoranbruten festgestellt. An zwei Orten, am Sempachersee und Mauensee, wurden nur wenige Nester gefunden. Am dritten Ort, in den Grangettes am Genfersee, brüteten 81 Paare in zwei Unterkolonien, die grösste bisher festgestellte Anzahl Nester im ersten Jahr einer Koloniegründung. Die beiden grössten Kolonien, Fanel und Champ-Pittet, beide am Neuenburgersee, beherbergten 50 % des Schweizer Bestands. Der Gesamtbestand zeigt eine starke Zunahme seit 2011, aber diese Zunahme betrifft nicht alle Kolonien. Vor allem kleine Kolonien zeigten nur ein schwaches Wachstum (Greifensee, Amsoldingersee) oder einen Rückgang (Baldeggersee).

Résumé

La population du Grand Cormoran est suivie en Suisse depuis les premières nidifications de l'espèce en 2001. Ce rapport présente les résultats du recensement de 2012, qui faisait également partie du recensement coordonné dans le Paléarctique occidental. Au total, 1037 nids ont été comptés en Suisse en 2012. Les deux sites du Stausee Niederried et de l'Alpnacherried, où des nidifications irrégulières avaient été observées à l'intérieur de colonies de Hérons cendrés, n'ont pas été occupés. Des Cormorans se sont installés en trois nouveaux sites, dont deux d'entre eux, au Sempachersee et au Mauensee, n'ont abrité que quelques nids seulement. Dans le troisième site, aux Grangettes au bord du lac Léman, 81 couples nicheurs se sont installés dans deux sous-colonies. C'est la première fois que l'on observe autant de nids dans une colonie pendant l'année de sa fondation. Les deux plus grandes colonies, au Fanel et à Champ-Pittet au lac de Neuchâtel, ont hébergé 50 % de l'effectif suisse. L'effectif national a connu une croissance marquée depuis 2011, mais pas dans toutes les colonies. Certaines colonies, surtout de petite taille, ont peu évolué (Greifensee, Amsoldingersee) voire régressé (Baldeggersee).

Riassunto

Dalle prime nidificazioni del Cormorano in Svizzera nel 2011 si è proceduto annualmente ad un conteggio delle popolazioni. Questo rapporto presenta i risultati del censimento 2012, integrato pure in quello coordinato a livello del Paleartico occidentale. In Svizzera sono stati contati complessivamente 1037 nidi. I due siti Stausee Niederried e Alpnacherried, dove nidificazioni irregolari erano state accertate in colonie di Airone cenerino, non erano occupati. Nuovi punti di nidificazione con pochi nidi sono stati osservati in tre siti, due di questi al Lago di Sempach e al Mauensee. Nel terzo, alle Grangettes, sulle rive del Lago Lemano, 81 coppie nidificanti erano concentrate in due sotto-colonie, ciò che costituisce il maggior numero di nidi constatati alla prima occupazione di una colonia. Le due colonie maggiori, Fanel e Champ-Pittet sul lago di Neuchâtel, ospitavano il 50 % degli effettivi in Svizzera. La popolazione nazionale ha avuto una crescita importante dal 2011 ma non in tutte le colonie. In particolare i piccoli nuclei di nidi non sono cresciuti (Greifensee, Amsolidingersee) o hanno avuto un calo (Baldeggersee).

Traduzione: Roberto Lardelli

1. Introduction

The IUCN/Wetlands International Cormorant Research Group (CRG) has previously organised counts of Great Cormorants *Phalacrocorax carbo* in the Western Palearctic. The overall results from these counts were presented in a leaflet[1], the results of the 2006 census published in 2011 (Bregnballe et al. 2011). There continues to be considerable interest in Great Cormorants and their numbers in the Western Palearctic, not least because of the continuation of conflicts between Cormorants and fisheries. As a consequence, the European Commission has launched a new initiative called CorMan primarily aimed at organising counts of breeding and wintering Great Cormorants in the Western Palearctic in collaboration with the CRG and at creating an internet platform for the dissemination of information about Great Cormorant numbers, management and experiences relating to methods to reduce impacts of Great Cormorants[2].

For these reasons, the European Commission 'Directorate-General for the Environment' (DG Environment) has asked the CRG to collaborate in organising counts of breeding colonies and of wintering Great Cormorants to update our knowledge of the abundance and distribution of Great Cormorants in the Western Palearctic both during breeding and winter. In 2012, a coordinated survey of breeding colonies was organised. The Swiss Ornithological Institute was approached to act as national coordinators as in previous surveys.

In Switzerland a monitoring programme of breeding Great Cormorants has been established as soon as the first pairs nested in the country in 2001. A first overview of the situation of breeding Cormorants ten years after the first breeding record was published in 2012 (Keller et al. 2012), together with the results of the colour-ringing project carried out at the first breeding colony (Antoniazza et al. 2012). Within ten years Cormorants had been found nesting at nine sites and the number of breeding pairs had risen to 560 pairs in 2010 (Keller et al. 2012). The monitoring programme has continued since. This report presents the results of the 2012 census in detail and an overview of the trend since 2001.

2. Methods

The counts are carried out by volunteers under the guidance of the Swiss Ornithological Institute. For each new colony a coordinator is designated who is responsible for organising the counts locally and for reporting the results on a special count form (Table 1).

The count methods follow the recommendations of the Cormorant Research Group. A colony is defined as a separate colony if it is isolated from other groups of nests by at least 2 km. Groups of nests at closer distances are considered as sub-colonies. Colony size, i.e. the number of breeding pairs is defined as the number of "apparently occupied nests". An apparently occupied nest is a nest that is in use and sufficiently finished to hold one or more eggs (i.e. a well-built nest). As a minimum, two counts were carried out during the period of the highest activity but most colonies were visited more frequently. On the Fanel islands, where Cormorants nest on the ground, colonies were directly accessed. In the other colonies nests were counted from some distance, either from boats or from the land.

[1] http://web.tiscali.it/sv2001/Cormorant_Counts_2003-2006_Summary.pdf

[2] http://ec.europa.eu/environment/nature/cormorants/home_en.htm

Table 1. List of colonies with name of local coordinators and main collaborators in 2012.

Colony number	Colony name	Coordinators and main collaborators
CH001	Lac de Neuchâtel: Fanel BE/NE	Michel Antoniazza, Jörg Hassler, Bernard Monnier, Paul Mosimann-Kampe, Pascal Rapin
CH002	Lago Maggiore: Bolle di Magadino TI	Roberto Lardelli
CH003	Zugersee: Risch ZG	Daniel Kronauer, Hans-Rudolf Kälin
CH004	Lac de Neuchâtel: Champ-Pittet VD	Michel Antoniazza, Jean-Claude Muriset
CH005	Greifensee: Riediker/Rällikerried ZH	Patrick Franke, Edgar Grether
CH006	Baldeggersee: Stäfligen LU	Thomas Troxler
CH007	Aare: Stausee Niederried BE	Verena Keller, Brigitte Mäder
CH008	Vierwaldstättersee: Alpnacherried OW	Martin Grüebler
CH009	Sempachersee: Oberkirch-Gammainsel LU	Verena Keller, Ruedi Wüst-Graf
CH010	Amsoldingersee BE	Martin Wettstein
CH011	Lac Léman: Bursinel VD	Alexandre de Titta, Isabelle Henry
CH012	Zürichsee: Lützelau SZ	Christa Glauser
CH013	Lac Léman: Les Grangettes VD	Olivier Epars
CH014	Mauensee LU	Ruedi Wüst-Graf, Hans Schmid
CH015	Sempachersee: Schorenmoos LU	Verena Keller

3. Results

3.1 Distribution and population size

Overall, 1037 Cormorant nests in 13 colonies were recorded in 2012 (Table 2, Fig. 1,2). The two sites Stausee Niederried and Alpnacherried, where a few Cormorants have been recorded irregularly in Grey Heron colonies, were not occupied. Cormorants were found nesting at three new sites. At Les Grangettes on Lake Geneva, 81 pairs established two sub-colonies, the highest number of nests so far in the first year of a colony's existence. On Lake Sempach, a single pair was recorded at a new site but the nest disappeared during incubation, probably destroyed during strong winds. Two nests were found at Mauensee, a small lake about three kilometres from Lake Sempach. The two largest colonies, both situated on Lake Neuchâtel, hold over 50 % of the national population. Three more colonies contained over 50 nests. All these colonies are situated on large lakes.

The overall number of nests increased markedly since 2011. Not all colonies continued to increase. Small colonies in particular showed only small increases (Greifensee, Amsoldingersee) or declined (Baldeggersee). The growth rate declined until 2008 and has been fluctuating around 1.3 since (Fig. 3).

Most colonies are found in the lowland areas of the Swiss Plateau, the colony in southern Switzerland in the low-lying valley of the Ticino, at the upper end of Lago Maggiore.

Table 2. Number of Great Cormorant nests counted in 2011 and 2012.

Colony number	Colony name and Canton	Year founded	Nests 2011	Nests 2012
CH001	Lac de Neuchâtel: Fanel BE/NE	2001	315	377
CH002	Lago Maggiore: Bolle di Magadino TI	2005	79	118
CH003	Zugersee: Risch ZG	2005	61	91
CH004	Lac de Neuchâtel: Champ-Pittet VD	2007	250	260
CH005	Greifensee: Riediker/Rällikerried ZH	2007	48	46
CH006	Baldeggersee: Stäfligen LU	2007	21	4
CH007	Aare: Stausee Niederried BE	2007	0	0
CH008	Vierwaldstättersee: Alpnacherried OW	2008	2	0
CH009	Sempachersee: Oberkirch-Gammainsel LU	2010	0	2
CH010	Amsoldingersee BE	2011	4	6
CH011	Lac Léman: Bursinel VD	2011	8	15
CH012	Zürichsee: Lützelau SZ	2011	8	34
CH013	Lac Léman: Les Grangettes VD	2012	0	81
CH014	Wauwiler Ebene: Mauensee LU	2012	0	2
CH015	Sempachersee: Schorenmoos LU	2012	0	1
Total			796	1037

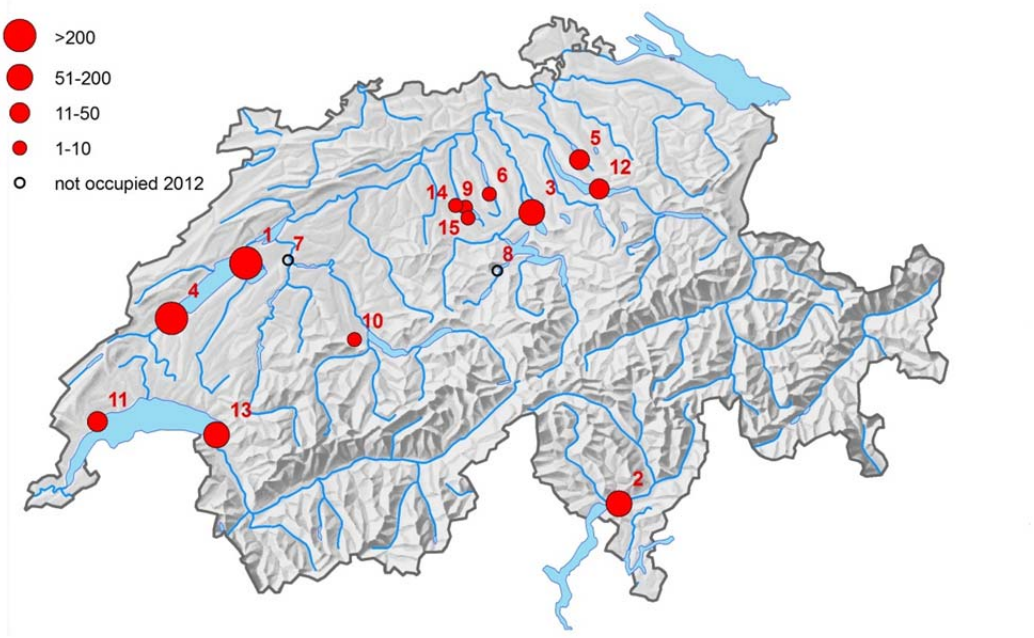

Figure 1. Distribution of breeding colonies of Great Cormorants in Switzerland in 2012. The numbers refer to Table 2 (shortened code).

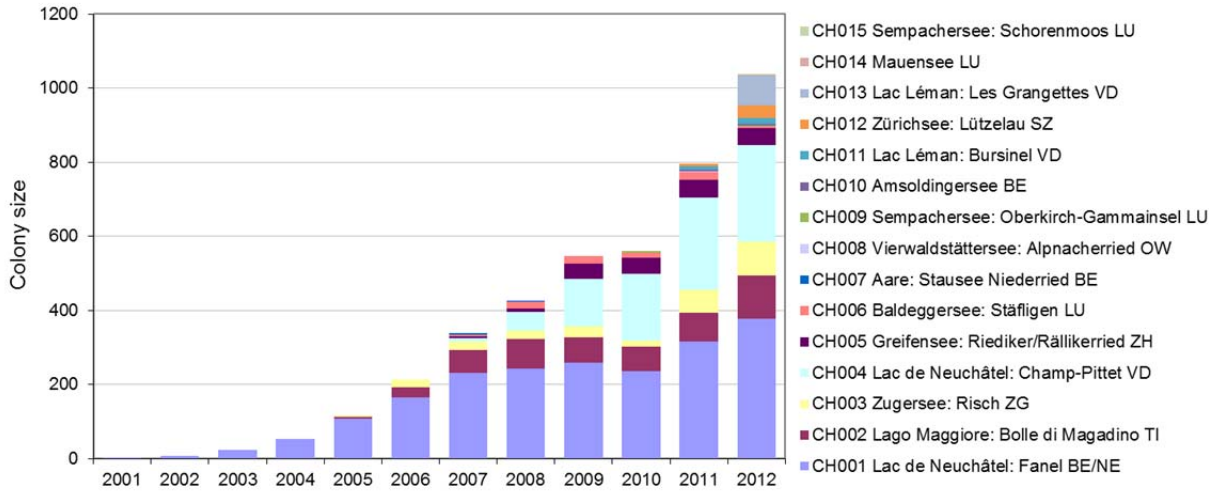

Figure 2. Breeding population size of Great Cormorants in Switzerland since the start of breeding in 2001. In 2010 the population on Zugersee was probably underestimated, because only one count late in the season was carried out.

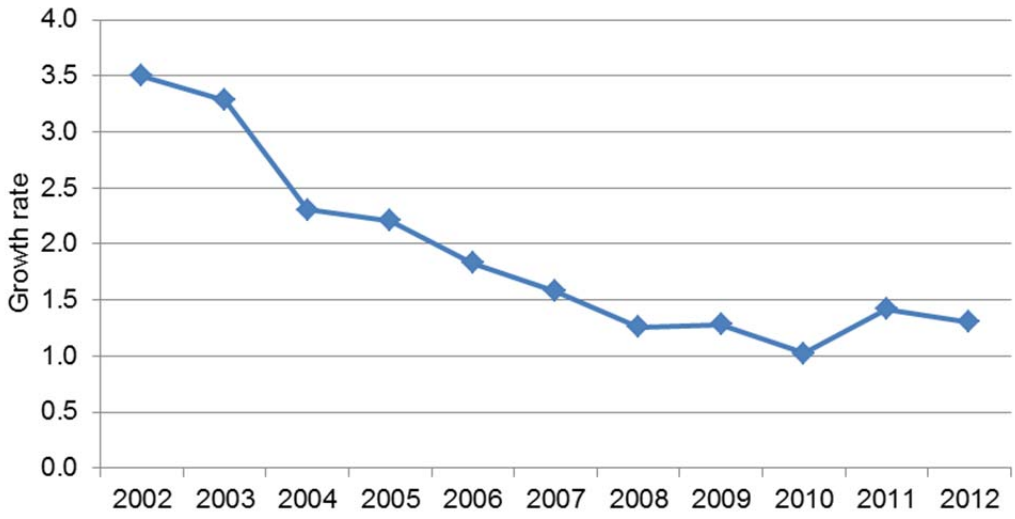

Figure 3. Growth rate of the breeding population of Great Cormorants in Switzerland since the start of breeding in 2001.

3.2 Habitat

Most colonies are situated at lakes, with the largest ones found at the largest lakes, Lake Neuchâtel, Lago Maggiore, Zugersee and Lac Léman (Table 3). All the large colonies are situated in areas with restricted access, six of which in waterbird reserves of international or national importance. Most colonies are situated on islands or small peninsulas. Colonies on the shore lie in areas with limited access for people. In the oldest colony, at the Fanel, Cormorants nest on the ground on two artificial islands. In 2011, part of the colony moved to trees on the shore, and in 2012 about 40 % of the nests were constructed in trees. In all the other colonies, nests are constructed in trees, most often poplar *Populus* sp., willow *Salix* sp. and alder *Alnus* sp.

Table 3. Habitat of Great Cormorant colonies in Switzerland. WR: Federal waterbird reserves of international (WRi) or national (WRn) importance; NR: other nature reserves.

Colony number	Colony name and Canton	Type of waterbody	Site protec-tion	Colony location	Nest location
CH001	Lac de Neuchâtel: Fanel BE/NE	Lake	WRi	Island/shore	Ground/trees
CH002	Lago Maggiore: Bolle di Magadino TI	Lake	WRn	Peninsula	Trees
CH003	Zugersee: Risch ZG	Lake	NR	Shore	Trees
CH004	Lac de Neuchâtel: Champ-Pittet VD	Lake	WRi	Peninsula	Trees
CH005	Greifensee: Riediker/Rällikerried ZH	Lake	WRn	Island	Trees
CH006	Baldeggersee: Stäfligen LU	Lake	NR	Peninsula	Trees
CH007	Aare: Stausee Niederried BE	Reservoir	WRn	Peninsula	Trees
CH008	Vierwaldstättersee: Alpnacherried OW	Lake	NR	Island	Trees
CH009	Sempachersee: Oberkirch-Gammainsel LU	Lake		Island	Trees
CH010	Amsoldingersee BE	Small lake	NR	Island	Trees
CH011	Lac Léman: Bursinel VD	Lake		Shore	Trees
CH012	Zürichsee: Lützelau SZ	Lake	NR	Island	Trees
CH013	Lac Léman: Les Grangettes VD	Lake	WRi	Shore	Trees
CH014	Mauensee LU	Small lake	NR	Island	Trees
CH015	Sempachersee: Schorenmoos LU	Lake	NR	Shore	Trees

4. Discussion

Twelve years after first breeding the Great Cormorant has established itself as a regular breeding bird in Switzerland with a growing population. All large lakes outside the Alps contain a breeding colony although in the case of Bodensee/Lake Constance all the colonies are situated in the Austrian and German parts (Keller et al. 2012). The Swiss colonies are part of a wider network of colonies in central Europe. Not all colonies showed an equal increase and some sites with few pairs were irregularly occupied. This is consistent with the pattern found in France, where inland colonies were occupied less regularly than large coastal sites (Marion 2008).

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