

The European Commission's protection of the Chinese cormorant *Phalacrocorax carbo sinensis* Blumenbach 1798, a disaster for the fish fauna, a fiasco for bird protection and an environmental scandal

The European cormorant issue is a very complicated, controversial and mythical environment policy issue at the interface between nature and culture and between conservation and invasion biology.

Two different cormorants

As early as 1979, the Commission quite correctly stated that the bird in Europe with the common name "Great Cormorant" is actually two different birds, the large North Atlantic Great Cormorant *Phalacrocorax carbo carbo* Linnaeus 1758 (*carbo*) and the much smaller Chinese cormorant (syn. Lesser Great Cormorant) *Phalacrocorax carbo sinensis* Blumenbach 1798 (*sinensis*). Currently, the rank of these two taxa is that of subspecies / geographical races. The Commission decision in the *Council Directive 79/409/EEC* (Birds Directive) of April 2, 1979 on the conservation of wild birds in "Appendix 1 - Species of particular conservation interest" to include "*Phalacrocorax carbo sinensis* | Cormorant (continental race)" was however incorrect and has no scientific basis.

A formidable expansion

When the decision was taken in 1979, there were only a few thousand *sinensis* distributed in a few colonies scattered across Europe, in Sweden, Poland and Germany, and with a core area in the Netherlands / Denmark. The subsequent explosive increase in the number of individuals and new colonies in more and more European countries led the Commission in 1997 to remove *sinensis* from Annex 1 with the document *Commission modifies the "Birds" Directive with respect to the Great Cormorant*. The measure was seen by the Commission as a major success for the Birds Directive and bird protection, but had no effect on the continued expansion as the number *sinensis* in Europe in autumn 2010 was estimated at nearly 2 million.

A fiasco for bird protection

The Commission is not alone in its unscientific attitude towards *sinensis*. Also the bird conservation organization BirdLife Europe sees the expansion of "The Great Cormorant" i.e. *sinensis* as a major success for its bird protection and lobbying when paradoxically enough it is exactly the opposite, a fiasco that undermines the organization's role as a key player for a science-based bird conservation. In Sweden, the lobbying has been so successful that the Environmental Protection Agency gave the secretary for the protection of birds

of BirdLife Sweden (SOF) the task in 2002 and 2010 to formulate so-called "national management plans for cormorant", which is devastating for the credibility of both the authority and of BirdLife Sweden.

Myths and Science

All over Europe the cormorant debate is intense, and a variety of opinions abound in discussion forums and media. In Germany the debate has been particularly intense, which led BirdLife Germany (NABU / LBV) to designate "*Der Kormoran*" as bird of the year 2010. In order to support the campaign the journal *Der Falke* published a special edition *Der Kormoran, Schutz für einen Fischräuber (57/2010)*, where a large number of highly qualified representatives of German bird research once and for all should refute some of those in their opinion false theses that circulate around the "Cormorant", but succeed instead with bravado in stirring up directly false myths. That *sinensis* is meant by "*Der Kormoran*" must be considered implicit since all observations of *carbo* in Germany are now recommended to be reported to the German Rarity Committee.

Two of the thesis, which in summary reads "*Der Kormoranbestand in Deutschland und in Europa, steigt immer weiter an*" can everyone interested in birds or fish and spends time at European waters observe with their own eyes is correct. Although metadata clearly indicates significant methodological difficulties to establish with certainty the numbers of *sinensis* and the data presented from different areas are uncertain estimates there is no doubt that the increase is enormous. Local temporary setbacks caused by population-limiting factors such as locally depleted fish populations or nesting sites plus difficult overwintering conditions some years, may of course result in a significant mortality of young birds and that colonies disappear. Also the different interpretations of the EU regulatory framework by the Member States' has resulted in measures such as oiling of eggs and hunting on breeding and wintering locations. Measures that have had some effect locally, but with a very limited impact on the overall population growth in Europe.

Also the thesis "*Der Kormoran hat keine natürliche Feinde*" is correct since, with one exception, *sinensis* has no natural predators in Europe. Undoubtedly opportunistic feeders and kleptoparasites as the Sea Eagle kill several *sinensis*, but this is of no great significance for the overall growth of the population. Other invasive animals are seriously proposed as important population-regulating predators on *sinensis* eggs and young, such as the North American raccoon and ironically also the only natural predator of *sinensis* on European soil, the Korean raccoon dog. *Sinensis* has an impressive reproductive potential, and can be long-lived (over 20 years) and have a clutch size of up to six (usually 3-4). Although breeding usually starts at 3 years of age the biological

prerequisites thus clearly indicates that the number of *sinensis* in Europe will continue to increase strongly if no action is taken.

A disaster for the fish fauna

The thesis "*Der Kormoran ist für den Rückgang von Fischen verantwortlich*" is supported by an increasing number of studies which point out *sinensis* as the single most important mortality factor for a wide range of local fish populations. And this despite the fact that the calculations are usually based on the direct consumption of fish, which represent only a fraction of the total mortality *sinensis* causes. Already in 1979 *sinensis* had a significant effect on the fish fauna in close vicinity to the breeding colonies and in wintering areas. With the continued expansion, more and more local fish populations were hit hard by the increased predation. Initially, damage was noted mainly for freshwater species of interest to the fishery such as perch, pike and zander, but subsequently also for marine species such as cod and migratory species such as eel, salmon and trout. Particularly alarming is the threat to some endangered species as the Common Nase (*Chondrostoma nasus*) and grayling, which face extinction with major genetic losses as a result. With several million *sinensis* fishing in European waters there is an ongoing disaster for the European fish fauna, and totally contrary to *Council Directive 2000/60/EC of October 23, 2000* (the Water Directive) and should engage all European environmentalists, conservation biologists and geneticists, and not just be a matter for desperate fish conservationists.

The perhaps most controversial thesis "*Der Kormoran ist kein einheimischer Vogel*" is resolutely rejected by Prof. Kinzelbach, one of the foremost experts on the historical bird fauna of Europe. In the *Nomenclature und Geschichte: Der Kormoran in Mitteleuropa* Kinzelbach develops the arguments in an article from 1999 entitled *Kormoran im Binnenlands Mitteleuropas: Eingeschleppt ... (Der Falke 46)*, which strongly rejects the suspicion put forward from several sources that *sinensis* could have been introduced to Europe and is alien to the European fauna. Initially Kinzelbach succeeds in separating *carbo* and *sinensis* but soon mixes the two taxa and decisively insists that finds of subfossils in Europe consists of *sinensis*, although only *carbo* have been identified with certainty. Older historical details on "cormorants", for example, from Hildegard of Bingen (1100's), Emperor Frederick II (1200s), and Conrad Gessner (1500's) is according to Kinzelbach unequivocal evidence of *sinensis*. And this despite the fact that it can be more easily explained by observations of *carbo*, which since the last ice age is naturally occurring in Europe. A bird that formerly nested along most of the coasts of Europe, the Mediterranean and the Baltic Sea and in all times and especially during the winters made occasional visits far inland. Neither the historical details presented by Kinzelbach of tree nesting, both

sinensis and *carbo* are facultative tree nesters, nor the etymology support the claim that *sinensis* has a long European history.

The publication “*Der Kormoran, Schutz für einen Fischräuber*” will doubtlessly be a subject of study for science history and illustrates the risk of blinded by love for birds not seeing the obvious and confusing beliefs and emotions with science. That access to all the scientific literature in the world is no guarantee for asking the relevant questions. How easy it is to fall back into the typological trap and rely on a few *fundamenta divisionis* rather than a methodical analysis based on a critical review of all available biological and historical information. To ignore one of the foundations of scientific biology, the correct identification of the organism being studied, and alternately using the common names "cormorant" or "Great Cormorant" instead of consistently and clearly distinguish the relevant taxa, *carbo* and *sinensis*. An omission which, with few exceptions, is made in the countless works published on the subject during the past 30 years and thereby made 'the cormorant issue' biologically incomprehensible. This has, intentionally or unintentionally, resulted in something that can better be described by the term disinformation.

An environmental political scandal

However, it is the European Commission who has the ultimate responsibility for the serious ecological and economic losses caused by *sinensis* to the European nature, fish fauna and fisheries, by the erroneous decision of 1979. The accumulated costs probably amount to several million € and are increasing every year. The genetic and ecological threats to *carbo* and the risk of *sinensis* spreading parasites, bacteria and viruses in the European fauna make “the cormorant issue” too serious to be reduced to an emotional quarrel between bird lovers and fishermen. Amazingly, *sinensis* is not included in the list *100 of the worst 'invasive aliens in Europe*, which was launched with great rumble in 2008 by the Commission project *Delivering Alien Invasive Species In Europe* (DAISIE). *Sinensis* should have a given place on that list, high above the Canada Goose, the American Ruddy Duck and the African Sacred Ibis in terms of impact on biodiversity, economy and health. It is also remarkable that *sinensis* is missing in the *Assessment to support continued development of the EU Strategy to combat invasive alien species* which the Commission presented in 2010.

In order to correct the Commission`s error regarding *sinensis* and to reduce the risk of repeating similar environmental political scandals, the European Commission must immediately;

- in accordance with the subsidiary principle revise the EU regulations to eliminate the formal obstacles for Member States to include *Phalacrocorax carbo sinensis* Blumenbach 1798 on the list of animals that are allowed to be hunted all year round, thus facilitating the formulation of scientifically and ethically correct national action plans against this alien invasive bird.
- carry out a transparent revision of the process and the scientific basis for, as well as of the biological and economic consequences of, the Commissions erroneous decision of 1979.

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