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### RE-INTRODUCTION OF OTTERS - SUPPORT OR RISK FOR OTTER CONSERVATION?

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**Abstract:** At the VII<sup>th</sup> IOC, there was concern over the increasing number of reintroduction projects not following IUCN guidelines. All members of the OSG are asked to contribute to the discussion. This article refers to my experience with the Eurasian Otter, *Lutra lutra*. The guidelines, and the current situation of this species are discussed, concluding that in Europe, reintroductions do not fulfill IUCN guidelines. Otters are recovering naturally as the environment is cleaned up - we need to wait patiently for years if necessary. However, for this to happen, it is vital that areas where otter populations are strong should be protected, and money is better spent on this than on artificial reintroductions.

One of the most intensively disputed questions at the VII. International Otter Colloquium (IOC) in Trebon 1998 was the sense (or the nonsense) of otter re-introductions in Europe. It resulted in recommendation II.1 saying that the IUCN/SSC Otter Specialist Group (OSG) and the participants of VII. IOC "are deeply concerned about the increasing number of otter re-introduction projects in Europe that do not follow IUCN re-introduction guidelines" (IUCN/SSC OSG 1998). Having dealt with otter conservation matters for 25 years I know this, sometimes tiresome, discussion in detail. So far, it has been a mainly theoretical discussion. However, it now gets a new quality because, in some European countries, re-introduction projects have either been started, or are planned to start soon. Many members of the Otter Specialist Group are deeply concerned about this development and this ongoing discussion. They consider it necessary that the group will define a clear position to this topic. To support this process there was an agreement in Trebon to publish the statements of two antipodes in this discussion as a "viewpoint" in the OSG Bulletin. All members of OSG are asked to contribute to this discussion. It might also help the "Re-introduction Advisory Committee", founded in Trebon, to develop specific criteria for the evaluation of otter re-introduction projects.

I would like to underline that the following statement is limited to the Eurasian otter (*Lutra lutra*) and the European situation, nevertheless, the central point of my arguments should also reflect the situation of other otter species or other regions. However, a serious discussion requires a detailed knowledge of the ecology of a species and of the specific regional preconditions.

When discussing the complex issue of releasing we first have to define what we are talking about. Clear definitions are given in the "IUCN Guidelines for Re-introductions" (IUCN 1998) as follows:

"Re-introduction": an attempt to establish a species in an area which was once part of its historical range, but from which it has been extirpated or become extinct. ("Re-establishment" is a synonym, but implies that the re-introduction has been successful).

"Translocation": deliberate and mediated movement of wild individuals to an existing population of conspecifics.

"Re-enforcement/Supplementation": addition of individuals to an existing population of conspecifics.

"Conservation/Benign Introductions": an attempt to establish a species, for the purpose of conservation, outside its recorded distribution but within an appropriate habitat and eco-geographical area. This is a feasible conservation tool only when there is no remaining area left within a species' historic range.

It might be undisputed that the last-named aspect is insignificant for otter conservation. "Translocation", however, is an aspect that is advancing more and more to the foreground, particularly in connection with discussions about the conflict between otters and fish production. Its value or importance, therefore, has to be discussed in connection with other issues. This is also partly true for the aspect "re-enforcement/supplementation", although I am sure that many of my arguments regarding

re-introductions will also meet this point. However, if it is requested, I am prepared to expand on and continue discussion on these aspects.

The other points that have to be clarified when discussing the need for re-introductions are the aims and objectives for such a measure. For these questions, the IUCN Guidelines offer the following definitions:

The principal aim of any re-introduction should be to establish a viable, free-ranging population in the wild, of a species, subspecies or race, which has become globally or locally extinct, or extirpated, in the wild. It should be re-introduced within the species' former natural habitat and range and should require minimal long-term management.

The objectives of a re-introduction may include: to enhance the long-term survival of a species; to re-establish a keystone species (in the ecological or cultural sense) in an ecosystem; to maintain and/or restore natural biodiversity; to provide long-term economic benefits to the local and/or national economy; to promote conservation awareness, or a combination of these.

I am sure there will be little dispute of the aims. It might be discussed how the term "minimal long-term management" could be interpreted, however, in general, it should be possible to agree on this principal aim.

Looking at the objectives, there might also be an immediate consensus that "providing of long-term economic benefits to the local and/or national economy" is of less importance for a re-introduction of otters (Just the opposite might be expected by interest groups like anglers or fishermen!). However, what about the other objectives?

Is there really a risk of extinction for the species *L. lutra* as a whole which needs actions like re-introductions "to enhance the long-term survival" of the species? I would accept this argument for a species that is reduced to a population of some dozen or of some hundred specimens. Though we do not have detailed numbers, a look at the distribution map of *L. lutra* should be sufficient to realise that its population cannot be counted in hundreds or even thousands of individuals. In fact, I am sure that tens of thousands of Eurasian otters still live in the distribution range of this species.

If we talk about the risk of extinction for the Eurasian otter, and if we argue seriously, we have to admit that this risk has to be evaluated on a regional level. It is, for instance, obvious that in parts of Central Europe, such as the Benelux countries, parts of Germany and France, Switzerland and the northern parts of Italy, the otter population is already reduced to a level which involves a high risk of complete extinction (in this region!). However, if we look at areas like the eastern parts of Germany and Poland, or to Ireland and Scotland, with survey results indicating more than 80 % of the country with otters present, any argument claiming the otter is near to extinction (in this region!) would be hard to understand.

Therefore, the enhancement of the long-term survival of the species is unsuitable as a serious reason for re-introductions – irrespective of the region where it is planned. But what about the other objectives, such as re-establishment of a key-stone species, maintenance or restoration of natural biodiversity, or promotion of conservation awareness?

Everybody who deals with terms like keystone-, flagship-, umbrella-, indicator- or target-species knows how hard it is to define which species, or why a species, should represent specific habitats or structures. Such definitions should also withstand scientific evaluation. This is not only because many other species may fulfil such functions in the same manner, but also because it is difficult to determine limits which are acceptable for a species or to weight the importance of single impacts, especially in such a plastic species as *L. lutra*. To give some examples: Who can seriously declare the Eurasian otter can only survive in clear waters, inhabited by (special species of) fish, with banks covered with (special species of) trees and undisturbed by human activities? Moreover, if someone really should argue this way: what are the limits? What visibility is necessary to define water "clear"? How much fish biomass of which species (in which seasons) has to be available for the otter? How many trees of which species and size are needed per kilometre of riverbank? What kind and which level of human disturbance are acceptable for the otter?

If we are honest, we must state that, for most of these (simple!) questions, we do not have an answer. Further, we know very little of the net of interrelations between all these (and the many other) factors representing an otter habitat and the problem to weight which factor can compensate another.

Does this mean that our argumentation is wrong making the otter a representative of ("healthy") wetlands? I am sure it is not. "Naturally" the otter belongs to all kinds of habitats which are influenced by water. And because of his large-spatial way of life he is an excellent symbol for large-spatial, diverse wetlands. But he is a symbol only – not more and not less.

What is the function of such a "symbol"? It has to transfer a message or – from a technical point of view – it is a tool. The message standing behind otter conservation is: We need large-spatial, diverse wetlands – as a living room for otters as well as a drinking water resource for man or as a contribution to biodiversity. And otter conservation as a tool means to establish a lobby for a sustainable management of habitats or natural resources.

Because of his high sympathy valence the otter is a much better tool than many other species (although this argumentation includes the risk that we divide fauna in valuable and valueless species – on the base of their level of popularity). It is surprisingly enough that a species with such a hidden way of life enjoys such a public awareness. And because we are living in a world where decisions are made mainly on an emotional level (that's why some people call this a manipulation society) it seems to be legal to use the otter as a tool - the "other side" (those people who do not act sustainably) are using the same "soft" arguments (like the argument that nature conservation hinders the development of new jobs – of which in many cases nothing is left when the aim is reached).

One of the often used arguments of this "other side" says: it does not matter if we dry our wetlands, if we canalise our rivers, if we pollute our water or if we urbanise our sea shores – we can handle all the negative effects technically and turn them to a positive result. We can clean our water in sewage purification plants - and it will be much more healthy than "natural" water. We can build artificial pools and lakes which are much better to use for recreation activities than all the swamps and wetland areas. We can construct new (meandering!) rivers which are much nicer and of a lower risk of flooding than "natural" rivers are. And to show people how an undisturbed sea shore looks like we can establish a national park – guiding tourists to the most beautiful places by boat or by helicopter. This argumentation is not only a proof for the unclouded belief that all problems of this world can be solved by technical measures. It also shows that people arguing this way are not prepared to go to the roots of the problems – they are dealing with the symptoms only.

And this is exactly the problem I see with re-introductions (of the otter in Europe): They support those arguments, strengthen the position of the "other side" and weaken the position of otter (habitat) protection. What is our counter-argument to the argumentation: You don't want us to canalise this river or to drain this wetland because it is an otter habitat? Don't worry, we will release new otters – as has been done elsewhere (and was described by "otter conservationists" as very successful). What is our counter-argument to an argumentation like: You don't want us to build a road through this wetland area because you fear it will isolate otter populations? Don't worry, we will construct an "otter friendly" bridge and compensate the losses of specimen by releasing others. These are no examples from my fantasia, I have heard them several times (as I also heard the argument: if our resident otters or the Eurasian otter as species are not able to survive in our canalised and polluted rivers we have to breed as long as we have animals which can survive or we have to replace them by North American river otters).

This might sound absolutely crazy to the ears of ecologists or conservationists. But we have to accept that on the "other side" many people are placed who never understood (and most of them will not do so in the future) the principles of ecology or sustainability. And this is not a minority. Looking on the results of evaluations of the so called public "environmental consciousness" we have to realise that there is a great difference between verbal statements and real behaviour (KUCKARTZ, 1998, REUTHER and JANSSEN, 1993). It is a fact that the majority of the European societies has a deeply rooted anthropocentric position and that it will need generations to re-implement a feeling which I would call "awe for non-human nature".

Now I hear the counter-argument that all this might be true for areas where otters still exist, but that my argumentation is no help for areas where the otter is already extinct and where people are prepared to

support habitat management and restoration. These people, so is argued in many cases, need a target and a proof that their efforts are suggestive and successful. I do understand this psychological problem. But is this argumentation not exactly what I described above? It says: Well we did wrong in the past, but meanwhile we found technical solutions to overcome the symptoms (in some "show areas") and now we want our reward.

Who argues that a re-introduction of otters is needed as a reward or a proof for (successful?) habitat management did the wrong job in his education or public awareness work. If we use the otter as a symbol for ecosystems, saying that all conservation measures in the name of the otter will benefit many other species of animals and plants, it is not really necessary to have the otter back soon. There are many other elements of flora and fauna which could be used as a reward or a proof for first successful steps towards a sustainable management of wetlands. The otter is on the top (of the food chain, of the ecosystem or of the symbols for intact wetlands). And if he comes back by natural recovery we will have a real proof for a successful management of wetlands. But if he is brought back by artificial measures like re-introductions this is – from a scientific point of view – only a proof that the otter can survive in this kind of habitat (saying nothing if this is an optimal or a sub-optimal habitat and if the artificially founded population is a long-term viable one) and it is – from the educational view – teaching people that they have done enough for wetland conservation and everything is fine.

I am sure this is not the intention of the objectives of the IUCN Guidelines "to promote conservation awareness". Public relation for re-introductions (as a necessary part of serious program) includes the risk to produce the impression to the public that animal releases are the "pinnacle of conservation", instead of making clear that this is the absolute last "prosthesis of nature conservation".

If I summarise my arguments so far I come to the conclusion that re-introductions of otters in Europe do not meet the basic objectives of the IUCN Guidelines: they are not necessary to contribute to the enhancement of a long-term survival of the species *L. lutra*, they do not support the otter's function as a "symbol" (what might be the sense of the term "keystone species in a cultural sense" as used in the IUCN Guidelines), their contribution to a restoration of natural biodiversity is low, they do not provide long-term economic benefits to the local and/or national economy, and they reverse the efforts to promote conservation awareness in the sense of an ecological consciousness and sustainable acting.

Remains the question: Does the countries or regions where the otter is already extinct have to accept this fact and should they forget about the otter? My clear answer is: No.

Looking on the results of the surveys done in the last decade it is clear that there is an obvious trend towards recovery by the otter of much of its former distribution ranges (REUTHER, in press). In Great Britain for instance, STRACHAN and JEFFERIES (1996) calculated an approximate otter population recovery curve for England from which it appears possible that the otter will recover to 75 % of its former range (site occupation) by the year 2025 – starting with a 5.8 % as shown in a 1977 to 1979 survey.

I am sure, some people will answer: 45 years what a long time. But what do 45 years really mean in the cycle of nature? This is less than the half of the age of a tree. And in many areas in Europe the otter is already extinct since such a period – without causing a complete ecological disaster in the areas. And we have to be aware that many (sustainable!) habitat management measures and most of the alterations in consciousness, attitudes and behaviour of the human society will need such a period before they can benefit the otter.

Many people who want to re-introduce otters fail to notice that the measures and alterations which are necessary for a serious re-introduction are the same which are needed for a natural recovery of the otter to its former ranges. Why therefore not consequently act in habitat management and socially alterations and simply wait for the otter? There is enough what have to be done and there are enough vital otter populations/occurrences, which could form the source for a natural recovery.

But they can fulfil this function only if they are kept in a vital position. That's why the protection and strengthening of the core areas of the otter's distribution in Europe needs top priority. For this purpose an important part of the available personal and financial resources in otter conservation is needed. The other part is necessary for the re-vitalisation of former otter habitats. In view of the limited personal and financial resources in nature conservation each person and each penny invested for re-introductions means a weakening of the two priority aims. Using personal and financial resources for re-introductions of otters might result in an artificial re-colonisation of some areas in Europe. But what

kind of logic is this, when at the same time the natural populations of otters decrease because of a lack of personal and financial resources for their protection?

Because of limited space I have concentrated my argumentation to the fundamental aspects of conservation policy for otters related to re-introductions. There are many technical aspects, which have to be surmounted before a re-introduction can take place. Some of them have been described earlier (MASON, 1991, 1992; REUTHER, 1992). I am sure most of them are soluble. I am also sure that some of the re-introductions planned so far will be more or less successful – as long as enough specimen were "pumped" into an area. The question remains if this will be the right signal for otter conservation and if it will support otter research and conservation. I completely agree to Hans KRUUK (1995) who said at the end of the last chapter of his book where he described technical measures to improve otter habitats: "All these points do not detract from the fact that what is required, most of all, is a conservation policy for whole wetlands. The above comments are merely suggestions to pursue the restricted aim of maximising numbers of otters – probably, we now have a substantial proportion of the knowledge required to follow such a course." And he ended up: "Because of the size of areas used by top predators such as the one I am discussing here (up to 80 km of stream for one individual otter), a strong human influence, including agriculture or fishing, will almost necessarily have to be included in any management plan. It is possible, however, to accommodate this next to an impressive diversity of wild fauna, and I believe that it is one of our more important duties as research scientists to advice on how this can be done. Questions need to be addressed such as how many fish one can harvest before affecting numbers of top predators, how nutrient input from agriculture and forestry affects fish populations (through plankton and invertebrates), how organochlorines, mercury, and other pollutants affect the food web. One needs to know much more about these problems and several others before we can feel some confidence that we are managing rationally. I hope that at least some of the conservation agencies in Europe will direct funding towards these ends, because rational management of the European wetlands is vitally important."

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## RESÚMEN

### Reintroducción de nutrias: ¿contribución o riesgo para la conservación de las nutrias?

Una de las cuestiones más discutidas en el VIIº IOC fue el sentido o no de las reintroducciones en Europa. Como resultado se concluyó que el IUCN SSC OSG y los participantes del IOC "están profundamente preocupados sobre el creciente número de proyectos de reintroducción de nutrias en Europa que no siguen los lineamientos de la IUCN". También se llegó al acuerdo de publicar las

opiniones de 2 antípodas de esta discusión como “puntos de vista” en el boletín del OSG. Se invita a todos los miembros del OSG a participar de esta discusión. Mis afirmaciones se limitan a la nutria eurasiática (*Lutra lutra*) y la situación europea, aunque el centro de mis argumentos pueden alcanzar la situación de otras especies o regiones. En los lineamientos de la IUCN para reintroducciones se considera que los objetivos de éstas deben ser reforzar la supervivencia de una especie a largo plazo, restablecer especies claves, mantener o recuperar biodiversidad, promover preocupación por la conservación y proveer un beneficio económico a largo plazo. Debería haber un consenso en que este último objetivo es de menor importancia para la reintroducción de nutrias. ¿Existe realmente un riesgo de extinción para la especie *Lutra lutra* como un todo que requiera reintroducciones para reforzar la supervivencia a largo plazo?. Aceptaría este argumento para una especie que está reducida a una población de algunas docenas o uno cientos de individuos, pero estoy seguro de que decenas de miles de nutrias eurasiáticas aún viven dentro del rango de distribución de la especie. Si hablamos de riesgo de extinción seriamente, debemos admitir que éste debe ser evaluado a nivel local. Es obvio que en partes de Europa central, la población de nutrias está reducida a niveles que implican alto riesgo de extinción. Pero en áreas con relevamientos que muestran más del 80% de sitios con presencia de nutrias, un argumento diciendo que las nutrias se encuentran cerca de la extinción (en la región), es difícil de entender. Por lo tanto, el reforzar la supervivencia a largo plazo de la especie es inadecuada como razón seria para justificar reintroducciones. Si hablamos de especies claves, paraguas, etc., es difícil encontrar una definición o razón para la representatividad de una especie para hábitats o estructuras específicos que puedan soportar una evaluación científica. No sólo porque otras especies pueden cumplir la misma función de la misma manera, sino porque también es difícil establecer los límites aceptables para cada especie o pesar la importancia de impactos singulares; especialmente en una especie tan plástica como *Lutra lutra*. Naturalmente la nutria pertenece a todo tipo de hábitat influenciado por el agua, y debido a su forma de vida, es un excelente símbolo de humedales diversos (sanos). Pero es sólo un símbolo, cuya función es transmitir un mensaje, o desde un punto de vista técnico, servir como herramienta. El mensaje es: necesitamos humedales diversos y grandes como un lugar para las nutrias, y como un recurso de agua potable para el hombre o como contribución a la biodiversidad. Como herramienta, la conservación de las nutrias significa ejercer presión para un manejo sustentable de hábitats y recursos naturales. El problema que yo veo con la reintroducción de nutrias en Europa es que refuerza la posición de que se pueden manejar técnicamente los efectos negativos y volverlos resultados positivos (según esta visión todos los problemas de este mundo pueden resolverse a través de medidas técnicas). Por otra parte, la reintroducción debilita la posición de protección de las nutrias (y sus hábitats). ¿Cuál es la respuesta al argumento: ¿no quiere canalizar este río o desecar este humedal porque es un hábitat de nutrias?, no se preocupe, liberaremos otras nutrias como ha sido hecho en todos lados y fue descrito por “conservacionistas de nutrias” como muy exitoso?. Tenemos que aceptar que en “el otro lado” mucha gente nunca entendió (y mucha tampoco lo hará) los principios de la ecología y la sustentabilidad. Y no son minoría. Puede argumentarse que mi posición no ayuda en zonas en donde las nutrias se han extinguido y donde la gente está preparada para apoyar restauración y manejo de hábitats, y que la gente necesita en muchos casos un objetivo y una prueba de que sus esfuerzos son sugestivos y exitosos. Pero este argumento es el mismo que ya mencionamos, dice: lo hicimos mal en el pasado, pero entretanto encontramos soluciones técnicas para sobreponernos a los síntomas, y ahora queremos nuestra recompensa. Las nutrias están en la cima de las cadenas tróficas, del ecosistema, o entre los símbolos de humedales intactos, y si regresan debido a la recuperación natural, tendremos una prueba real de un manejo exitoso de los humedales, pero si las devolvemos artificialmente, sólo obtenemos prueba de que pueden sobrevivir en este tipo de hábitat (sin saber nada respecto a si esta población es viable en el largo plazo, o de la calidad del hábitat). Resumiendo mis argumentos hasta ahora, concluyo que la reintroducción de nutrias en Europa no alcanza los objetivos básicos de los lineamientos de la IUCN. En los países y regiones en los que las nutrias ya han desaparecido lo correcto sería trabajar en el manejo de hábitat y sobre alteraciones sociales, y esperar por las nutrias (en Gran Bretaña, por ejemplo, parece probable que en 45 años, la población recupere aproximadamente el 75% de su distribución histórica). Existen suficientes poblaciones vitales que pueden actuar como fuentes para una recuperación natural. Es de máxima prioridad proteger y fortalecer áreas núcleo de la distribución de las nutrias en Europa. Para este importante propósito se necesita parte del personal y los recursos económicos disponibles; la otra parte, para la revitalización de antiguos hábitats. Desviar recursos y personal hacia reintroducciones significa debilitar estos 2 objetivos.