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THE EAGLE OWL IN BRITAIN

NATIVE OR ALIEN?

A REPORT BY THE WORLD OWL TRUST

ERRATUM

When we first placed this report on our website we attributed the answers given to the Risk Assessment (see p. 4) to CABI Bioscience. We have now been informed that CABI only provided the template for the R.A. Questionnaire and that the answers given were in fact the work of 'independent experts', reviewed by one peer reviewer, and the Non-Native Species Secretariat Risk Analysis Panel (NNRAP). We apologise to CABI for this error.

2010

THE EAGLE OWL IN BRITAIN – NATIVE OR ALIEN?

This report is an attempt to record the findings of the World Owl Trust's involvement in the conservation and study of the European Eagle Owl *(Bubo bubo bubo)* and to present data which we believe lends credence to the view, held by many owl researchers, that this bird is a valid native species to Britain. We have tried to write objectively and without bias, but as the reader will soon become aware, we do hold opinions which are undoubtedly at odds with many others, including national ornithological organisations we nevertheless respect. We make no apology for this. We write from long experience with owls in general, and Eagle Owls for the past three decades. We therefore claim to be writing from first hand knowledge gained both in the field and with captive birds. The report is meant to be constructive rather than destructive, and we would ask for it to be read with all of the above in mind.

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FOREWORD

The World Owl Trust (WOT) is widely acknowledged as the world's leading global owl conservation organisation. It is a registered UK charity (No. 1107529) and has representatives working on its behalf in 13 different countries. It has many years of experience with the European Eagle Owl (*Bubo b. bubo*) both in the wild and in captivity, having studied its biology, behaviour and conservation status at its renowned World Owl Centre, based at Muncaster Castle in the Western Lake District, and in the field in Finland, Scotland and Northern England – the latter with the help of observations, friendships and log-books of experienced licensed fieldworkers. We are fortunate in having several dedicated amateur field naturalists in our ranks ('amateur' only in the sense that they carry out their observations and research out of sheer enthusiasm, in their own time and at their own expense) and we can safely say that their knowledge and expertise is second to none. Without their tireless input we would undoubtedly still be in the 'Dark Ages' concerning Eagle Owls in Britain, as well as several other upland birds of prey. Sadly, their contributions do not always receive the appreciation they deserve from the 'professionals', so we are glad that this report gives us the opportunity to register our appreciation of their invaluable part in providing much first-hand data to allow us to publish this dossier with confidence.

From the early 1980's – early 1990's the Trust was involved in *'Berguv Nord'* (**Project Eagle Owl–North**) launched in 1977 to help stem the decline of the Eagle Owl in the northern region (Norrland) of Sweden by breeding owlets in captivity and then releasing them into the wild. Like its predecessor *'Berguv Sydvast'* (**Project Eagle Owl - South-West**) this project was a huge success, realised its Aims, and received wide acclaim, as did similar reintroduction programmes in Germany, Norway, Switzerland, France anBelgium.

Despite the above we wish to state categorically that the World Owl Trust has never carried out or taken part in any form of deliberate release or reintroduction scheme for the Eagle Owl in Britain. Nor do we intend to do so. Indeed, we have made this abundantly clear both verbally and in print (see Warburton (1997, 2006a).

We have long contested the claim that Eagle Owls are being deliberately released in Britain, since the Trust has no knowledge of any such programmes ever being attempted. However, we have recently learned that releases have allegedly occurred as unofficial reintroduction programmes with the result that it is now being claimed that some 44 pairs of Eagle Owls are now currently breeding in Britain in areas such as Scotland, Wales, south to Sussex and Kent. This is fresh news to us and to date we have been unable to find any confirmation that the claim is in fact, correct. If it is true we would be frankly staggered and it must be the best kept birding secret of all time! If it is true, the people involved are doing the bird no favours. Such releases would simply give ammunition to the 'anti-Eagle Owl' sector and make our task of proving natural immigration or residency much more difficult. For the sake of accuracy and future record we would welcome any first-hand reports of this sort of misguided

initiative taking place, and if so in what area of Britain. For obvious reasons we are quite prepared to receive such data as anonymous information, and would guarantee that we would treat it as such. Our only aim is to gain as clear a picture as possible of the origins of birds currently breeding in Britain. However, we would stress that what we need is first-hand personal knowledge, not conjecture or rumours from third parties. Any such reports can be sent in confidence to tonyowl@btinternet.com

In the mid 1990's the Trust began to explore the reported presence of Eagle Owls in the Highlands of Scotland and elsewhere, the purpose of our study being three–fold. We wished to try and ascertain: -

(1) *Has the Eagle Owl ever been a legitimate breeding resident in Britain in the past?*

(2) *Is it still present, and if so, is it a relict native, alien invader, escapee, deliberate release or a pioneer immigrant?*

(3) *Are all the occasional records being received now, simply of birds being deliberately released or escapees from captivity? If so, who is carrying out the releases, and where?*

The key questions which needed answering were: -

(a) *"Could the Eagle Owl have come into Britain in the wake of the clearances of the ancient 'wildwood' by humans in the past 6,000 years and survived as small isolated remnant populations in remote areas"?*

(b) *Have some individuals made it across the North Sea/English Channel from Scandinavia or Europe, the most likely routes being from Norway to Shetland and Orkney, and thence to the Scottish Mainland; or in more recent times from the Netherlands and Belgium to the East Coast of England.*

INTRODUCTION

An article in **British Wildlife** magazine (August 2009) by Mike Toms of the British Trust for Ornithology, revealed that the **'Non-native Species Secretariat'** (NNSS) had commissioned a Risk Assessment by FERA (the **Food & Environment Agency** wing of DEFRA) *"to develop a better understanding of the potential environmental impacts of European Eagle Owls known to be breeding successfully in Britain"*. Despite claims by the NNSS (in comm.) that they *"regularly consult with expert organisations and individuals with regards to* (what they consider) *non-native birds"* it quickly became clear that this Risk Assessment has come as something of a surprise to many owl workers in Britain and was virtually unknown to many organisations such as the World Owl Trust, Hawk & Owl Trust, International Owl Society, Northern England Raptor Forum and many individuals directly involved in owl conservation and research. When questioned, all these people without exception informed us that they had been neither consulted nor notified about this matter. However, it became evident that the BTO and no doubt the RSPB,

Natural England and BOU (probably the '*expert organisations' referred to?*) did! . The same scenario also applies to the recent news that the Eagle Owl is also to be placed on Schedule 9 of the Wildlife & Countryside Act in April 2010, meaning that it will then become illegal to allow a European Eagle Owl to escape or be deliberately released – punishable by a jail term of two years or a fine of £5,000! Given the number of Eagle Owls used in free-flying displays to the public and flown privately, this gives much food for thought!

While we fully appreciate that viewpoints are extremely polarized when it comes to this bird, we feel it unfortunate that the answers given to questions in the Risk Assessment, instead of being objective, perpetuate many unproven misconceptions about the biology and behaviour of this owl, due to mainly using data collected in Europe and Scandinavia as pertinent to the Eagle Owl's possible impact on the British environment. In addition, unsubstantiated statements have been made regarding its past and present status in Britain, undoubtedly repeating the words of the British Ornithologist's Union Rare Breeding Birds Panel (RBBP).

Even more worryingly, a perusal of the answers to the Assessment's set questions leaves one with the uneasy feeling that these are negatively biased regarding Eagle Owl presence in the UK, and are slanted towards the need to manage (for 'manage' read 'cull') the birds currently breeding in the UK. In fairness, in recent correspondence with the International Owl Society (I.O.S.), and also during meetings, both DEFRA and the RSPB have denied that any such cull is being contemplated. We sincerely hope this is the case, for such a cull would undoubtedly bring the wrath of the British public and the majority of bird-watchers down upon the perpetrator's heads as well as seeing a mass exodus from any membership organisations involved in or sanctioning such action.

One very strange omission in the Risk Assessment is any response to the first question asked, i.e. *"What is the reason for performing this Risk Assessment"?* However, to quote a DEFRA 'spokesperson' (in answer to a direct question from the International Owl Society) they justify it with the following statement:-

"The Eagle Owl could have an adverse impact on the survival of our native birds by competing with them for food and habitat, but could also directly prey on a number of species of conservation concern, including other birds of prey and owls. As such the Eagle Owl will be added to Schedule 9 of the Wildlife & Countryside Act, making it an offence to release (it) *into the wild". In addition, an independent risk assessment has been commissioned to explore the potential threats that the Eagle Owl could pose as an invasive non-native species if it was to establish a significant presence in the wild. This risk assessment is currently out for comment to enable any interested party to contribute further relevant information or to challenge the risk assessment on relevant scientific grounds. The final risk assessment will inform the future consideration of policy by the GB Non-native Species Programme Board".*

It is this statement as well as some of the answers within the Assessment itself which are causing our current concerns. e.g.: -

2.3 Q. 'How difficult would it be to contain the organism within the Risk Assessment Area',
A. '*Containment is likely to be effective only through a programme of controlled culling. Even with this, there is a likelihood of continued escapes and deliberate releases, with the potential for individuals from these to disperse beyond the Risk Assessment area'.*

2.17 Q. 'How easily can the organism be controlled'
A. *'The sedentary nature and territoriality of breeding pairs, together with the nature of the territorial behaviour (calling from song posts) should allow control of the organism at a stage when its population is at a low level. For this strategy to work, it would be essential to gain support from the Birdwatching community and get them to report the presence of territorial birds.* ***Control will need to be sustained*** (our emphasis) *allowing for the fact that continued releases and accidental escapes are likely to continue over time'.*

Is it any wonder that we have the suspicion that the final decision might well lead to a cull, as has happened with the Ruddy Duck *Oxyura jamaicensis*, Canada Goose *Branta canadensis* and Ring-necked Parakeet *Psittacula krameri* already. We therefore remain to be convinced that this is not the final plan.

The official DEFRA statement leaves no room for doubt that so far as they are concerned the Eagle Owl **is** a non-native alien to Britain, and as such poses a potential threat to the survival of our native birds, including species of conservation concern.

The RSPB's Press Officer took the same view when he stated (again via an email in response to a question from the IOS) the Society's stance and position in relation to the Eagle Owl in the following words: -

"Several people involved in this matter have voiced the opinion that they feel that the RSPB are worried about upsetting their membership should they be seen to be supporting the eradication of the EEO within the UK and as such it is felt that the RSPB are simply sitting on the fence over this issue and will then in turn follow the final decision once it is made. From my discussions with RSPB staff I form the opinion that they consider that the EEO is an invasive species in the UK and are happy to quote English Nature's viewpoint on invasive species".

Not much doubt there then, the RSPB too is convinced that despite the lack of proof to that effect, the Eagle Owl is an invasive alien. Needless to say, as the above statement makes very clear, some RSPB members, having finally learned of recent events, **have** voiced their complaints about the Society's stance and in some cases resigned their memberships because of it. This possibly explains why Mark Avery, the RSPB's Director of Conservation has stepped in smartly to release a further statement: -

"The RSPB's position could be described as welcoming to wild Eagle Owls if they arrive back in the UK from Europe. We have been told by Spanish

conservationists that there is little to worry about in terms of the impacts of Eagle Owls on native wildlife. However, we have not had Eagle Owls in the UK since the last Ice Age, and so there is always that nagging doubt as to what they might eat. So we will be continuing to collect owl pellets for analysis".

The WOT of course fully agrees that more research is needed; we also would like to have definitive knowledge of the behaviour and diet of British Eagle Owls, but in fairness (we did say we have tried to be objective in compiling this report) we should point out that Spanish conservationists work with the Iberian subspecies *Bubo bubo hispanus* which lives in a hot, dry environment in which Rabbits *Oryctolagus cuniculus* abound – so not surprisingly this subspecies specializes in Rabbits as prey! What **we** are more interested in is what Eagle Owls are eating in Britain!

We are also pleased to learn that Mr Avery – in a conversation with an officer of the I.O.S. in early February – has stated categorically that the RSPB would **not** support any cull of Eagle Owls in Britain. This is excellent news, and we therefore trust that the Society will act on the information contained within this report and reconsider their statement that this species is a non-native which has not been recorded in Britain since the last Ice Age.

We also note that in his book **'Birds and Forestry'** (1990 p.45) Mark Avery lists the Eagle Owl as a possible future colonizer of Britain with the words *"At the very top of the tree is the Eagle Owl. It needs seclusion and a mixture of open land and forest and the remote forests of the far north* (of Britain) *might be large and quiet enough to support an Eagle Owl population as they* (the new planted conifer forests) *move into the second rotation"*. So presumably the RSPB's now Director of Conservation accepts that natural colonisation **is** possible.

Mark Avery' recent responses are hopefully a step in the right direction, for it implied that unlike some other organisations, the RSPB had no qualms about the Eagle Owl's impact on other species (?). Unfortunately he went on to say: - *"It has been said that Eagle Owls are known to have killed Hen Harriers on RSPB nature reserves – not true"*. We suspect that what he is referring to here is an unfounded claim of this happening in Bowland, Lancashire (not on an RSPB reserve), and we will be referring to this episode in the **'THE EAGLE OWL AS A PREDATOR'** section. However, we would like to thank Mark for refuting this charge rather than using it as 'ammunition' in the case against the Eagle Owl - a very welcome respite from distorted and misinterpreted data garnered from studies in other countries

As can readily be seen, the situation we now find ourselves in is a complex one, and it is this that has prompted us to attempt to bring together in one document all the information we have gleaned over the years. We consider this dossier to be a fair account of Eagle Owl behaviour and its true st**a**tus both past and present in Britain, with reference to observations made in Europe and Fennoscandia. At this juncture, we would like to thank all the many fieldworkers, researchers and proof readers who have freely given us their data,

time and suggestions to ensure this report is as comprehensive and factual as possible.

THE 'NATIVE v. ALIEN' DEBATE

In the course of our work on this controversy we have expended a great deal of time and effort in perusing the old literature and reports we have been given. We have also strived to remain objective and non-selective.

As a result of this research, which included discussions with licensed fieldworkers, foresters, gamekeepers, nature reserve managers, and owners of large shooting estates in Perthshire (chosen because of a pair breeding there in 1983 and the fact that it contained a great deal of eminently suitable habitat and a huge population of Rabbits) we were left in little doubt that Eagle Owls were indeed present and breeding in this area and elsewhere (see p.19. **RECENT HISTORY**).

Sadly, we soon discovered that our views were at odds with such influential bodies as the British Ornithologist's Union (BOU), RSPB and others. The BOU had reached the conclusion that there was no reliable evidence that the Eagle Owl had ever occurred in the wild state in Britain and Ireland in the last 200 years, and the RSPB followed in the BOU's footsteps when making their own official statement on this matter, stating: - *'There is no evidence that birds other than from released stock or their offspring, have bred in Britain in recent times'*. Both organisations claimed that since Eagle Owls have been kept and bred in captivity since the 1700's (sic.) all existing records of Eagle Owls in the wild in Britain are likely to refer to escapes or deliberate releases. This rather staggering conclusion is of course in itself sheer conjecture rather than scientifically proven fact, and also flies in the face of the BTO's comment that records from Orkney (1830), Shetland (1863, 1871) and Argyll (1883) *'seem likely to be genuine wild birds'*. In his article, even Mike Toms seems somewhat perplexed by the anomalies being expressed by the BOU and RSPB. Having commented *'It seems surprising that the species is not better represented within more recent history'* he goes on to say *'for example a number of authors have commented upon the lack of references to this species in literature or folklore within Britain'*. Later he paradoxically states *'county avifaunas and local bird reports contain references to Eagle Owls that extend back over many decades, **and in some instances these reports appear to show genuine wild Eagle Owls as occasional visitors to the British Isles'*****!** Let us repeat – both of these statements come from the British Trust for Ornithology.

Although the apparent absence of the Eagle Owl in Britain is often attributed to possible human persecution in the past, as occurred in its European and Scandinavian ranges (e.g. Mikkola 1983), this is not the whole story. When any attempt is made to assess the past and present status of this species as a British native it is essential that the existence of suitable habitat and prey availability is brought into the equation. This cannot be over-stressed.

These factors always seem to be ignored by those who postulate that there is a lack of historical records of the Eagle Owl in Britain, but the fact is Britain's

environment has not stood still since the ending of the last Ice Age over 10,000 years ago. Indeed, it has changed drastically over the ensuing centuries.

Up to 6,000 years ago Britain was said to be virtually covered by the ancient 'wildwood' which had grown as the climate warmed up (though this concept of continuous dense woodland has now been challenged by Vera (2000) who believes it more closely resembled that now found in the New Forest where open areas are created by the grazing and browsing actions of large herbivores).

If the habitat **was** continuous wildwood this would not have been ideal for the long-winged Eagle Owl, a species which prefers a mixed habitat of scattered woodlands with large open areas and rocky cliffs to nest on. A varied habitat is also needed to provide the wide variety of ample prey needed by such a large predator. So if the landscape during this period was sub-optimal for the Eagle Owl it is logical for there not to be many examples of fossil evidence of the bird until the countryside began to be opened up, starting in the Mesolithic period when the 'hunter-gatherer' lifestyle of the human population began to gradually change into one of farming and pastoralism. The major changes however, came about in the Neolithic era, and this period saw the beginning of Britain's major deforestation, caused to a large extent by the number of goats (and later sheep) which were kept in large numbers from those times. The ability of goats in particular, to denude their surroundings is legendary and it is because of this that much time and energy is now spent on eradicating them from countries and islands where they have gone feral – to the detriment of the world's biodiversity. Here in Britain, the English countryside in particular was never to be quite the same again, and the burgeoning sheep and deer populations have continued this deforestation process to this day in many upland areas of Britain. It was startling to see how the reduction in sheep numbers following the scourge of Foot & Mouth Disease in 2001 resulted after just two years, in a new growth of heather on former barren sheep-walks. Given the chance this would eventually have reverted to natural forest – and this is the main aim of recent conservation initiatives to help this process. These areas could perhaps one day become suitable new habitat for a new population of Eagle Owls?

As the forests opened up, and as long as the human population remained low, the Eagle Owl would have been able to gain ground a little, no doubt inhabiting the most suitable areas which suited its lifestyle. However, as a top predator their numbers would have remained low and their populations scattered, so at no time would it have been common – top predators don't function that way! So again, it should come as no surprise that fossilized remains are apparently absent post the Meare Lake Village find described below.

At this juncture we need to draw attention to the oft-repeated statement that there are no records of the Eagle Owl in Britain in historical times (BOU and RSPB). But what do they mean by 'historical'?

To be completely scientifically accurate 'historical' should refer to the last 1,000 – 2,000 years, which is important since the Meare Lake Village Eagle Owl remains described in Stewart (2007) date back to c.2,000 years ago (Gray 1966), making them the latest known archaeological remains of an Eagle Owl in

Britain – which would destroy the beliefs of the BOU and RSPB! Indeed, Stewart's concluding remark to his paper states *'A late date such as this, coming from our present climate regime would, if genuine, confirm the native status of the Eagle Owl in Britain'*. The BOU apparently think differently. So far as they are concerned 'recent' or 'historic' means that only the last 200 years can be taken as the criteria for this status– thus ostensibly ruling out the Beaver *Castor fiber* (extinct in Medieval times – i.e. by the 15th C.) and Lynx *Lynx lynx* (extinct by the end of the 1st C. and not mentioned in 'historical' texts, as a former native). And yet the Beaver has already been recently reintroduced to Scotland, and the Lynx is being considered as the next possible 'reintroduction'. We would dearly like to know why mammals and birds are treated differently in this respect and we suggest that for the sake of scientific accuracy, Stewart's interpretation of a 'native species' is the more acceptable one.

Eagle Owls in Fennoscandia are often found in coniferous taiga consisting mainly of open pine forests and plentiful bogs. In Britain this is a habitat only found in the Scottish Highlands, and it is therefore here where we would expect to find Eagle Owls establishing themselves to any degree in the Middle Ages, with perhaps smaller concentrations in England where mature semi-open oak woods existed interspersed with rocky heather clad moorlands and open glades such as those found in the New Forest. By and large these habitats only occurred naturally in Northern England and the Southern Uplands of Scotland and we feel it is no coincidence that it is in the three areas described that most apparently authentic records of probable wild Eagle Owls are currently coming from – possibly aided by the westerly spread of Eagle Owls attributed to the successful Scandinavian/European reintroduction programmes.

We know that the landscape changes described above had a profound affect on Britain's larger mammals, the predators in particular. From Medieval times much of Britain was transformed into farmland, to the point where today, no 'wildwood' survives at all. There are **some** 'ancient' woodlands and 'long-existing' woodlands, but these are but pitiful remnants of former forest cover, and in no way did the modern-day commercial conifer forests compensate for this loss. Wolf C*anis lupus*, Bear *Ursus arctos* and Lynx went extinct, as did the Beaver (no trees = no Beavers = a clue to the environment at that time!), Elk *Alces alces*, Wild Boar *Sus scrofa*, Aurochs *Bos primigenius* and Tarpan *Equus ferus*. Even Roe Deer *Capreolus capreolus* disappeared. Only the smaller fry survived, Red Fox *Vulpes vulpes*, Badger *Meles meles*, Wild Cat *Felis sylvestris* and Pine Marten *Martes martes*, for example, and it would be naïve to believe that a predatory bird as large as the Eagle Owl would have remained unaffected. It is more than possible that at some time or other, it could have retreated to just a few areas of the Highlands, or even possibly have died out for a time. Such events would obviously explain the lack of hard evidence of its presence as a native species. It is hardly surprising therefore that British Eagle Owl records remained sparse until people began to keep records of the species they saw (and often shot) around them. We believe that the records we will now show, mark that period, beginning in the 17th Century,

So far as 'escapes and deliberate releases' from captivity are concerned, the earliest officially recorded captive-breeding of the European Eagle Owl *Bubo*

bubo bubo we have found (Morris 1850) was in April 1849 by Mr. Edward Fountaine of Easton, near Norwich who succeeded in rearing three owlets to fledging. It was also reported by Hopkinson (1926) to have been bred in captivity by Chawner in 1913 as well as at Arundel Castle, Sussex – date unknown. In view of this it surely takes an incredibly doubting mind to ascribe Eagle Owls recorded in the wild in Shetland and Orkney (where they were even described as 'considered to be permanent residents' by the Rev. F.O. Morris writing in his **'History of British Birds'** in 1850), as well as birds observed in the Scottish Highlands and Northumberland, as 'escapes or releases from captivity'. Even Cramp (1985) describes it as *'straggling to Scotland'*.

We therefore offer here, a few more examples (in date order) of why we believe that contrary to the views expressed by the BOU Rarities Committee and RSPB, there is **every** reason to believe that genuine wild-origin Eagle Owls **have** existed in the past – and still exist - in Britain: -

- A study of fossil evidence and more recent archaeological records by John Stewart (2007) of the Department of Palaeontology at the London Natural History Museum has clearly demonstrated that the Eagle Owl existed in Britain as long ago as 700,000 years through to the last Ice Age (ending c.10,000 years ago) and then into the Holocene (i.e. the last 10,000 years) and possibly into the Mesolithic 10,000 – 5,500 years BP (Bramwell & Yalden 1988). Palaeontologists such as John Stewart and Dr. Derek Yalden apparently have no problem in considering fossil and archaeological remains as relevant to the debate as to what does or does not constitute a native species, and Yalden (1999) categorically states *''The end of the last (Devensian, in Britain) glaciation was a climatically complicated event, This period, always known as **the** Late Glacial …… is nevertheless an important one for the history of mammals in Britain and indeed elsewhere in Europe*

- The afore-mentioned Rev. Morris (Morris 1850) who himself hailed from Nafferton in the East Riding of Yorkshire, provides accounts of three Eagle Owls killed in that county; one shot in 1824 at Horton, near Bradford; one caught in a wood in Harrogate in 1832; and another shot in the woods of Clifton Castle, Bedale, Yorkshire in 1845. He was also told of another one by the Rev. R.P. Alington, which was 'taken' in the parish of Stainton le Vale, in Lincolnshire in 1848. Morris also knew of others met with in Kent, Sussex, Devon, Suffolk, Durham, Derbyshire (several near Melbourne east of Burton-on-Trent, and one at Shardlow, near Derby in 1928), and even one in Hampstead, London in 1845 – surely an escape (from the Zoo???). Crucially, all these records came before Fountaine's reported first breeding in 1849. Another record from Morris which provides a possible insight into how Eagle Owls might arrive in Britain from Scandinavia and Europe comes from his mention of four specimens visiting Donegal in Ireland after a great snow-storm from the north-east (possibly Norway?).

- Writing about his life as a 'shooter naturalist' in the north of Scotland in the mid-1880's, the notorious Charles St John (described by Robert

Dougall in his Foreword to the book *'A Scottish Naturalist'* (Atha 1982) as '*a naturalist with an exceptional gift for intimate, meticulous observation, combined with an ability to write with total accuracy …..…')* said of the Eagle Owl *'I have known of one instance of the eagle owl being seen in the district* (Moray*), and it was not then captured; but the description given to me could not have applied to any other bird. A man described to me a large bird which he called an eagle. The bird was sitting in a fir-tree, and his attention was called to it by the grey crows uttering their cries of alarm and war. He went up to the tree, and close above his head sat a great bird, with large staring yellow eyes, as bright (so he expressed) as two brass buttons. The man stooped to pick up a stone or stick, and the bird dashed off the tree into the recesses of the wood, and was not seen again. The colour of its eyes, the situation the bird was in on the branch of a tall fir-tree, and its remaining quiet until the man approached so close to it, all convince me that it must have been the great owl whose loud midnight hootings disturb the solitude of the German forests, …..'.*

- R, Bowdler Sharpe of the Zoological Department of the British Museum, in his book **'A Handbook to the Birds of Great Britain'** (1896) writes of the Eagle Owl (then called *Strix bubo; Bubo ignavus and Bubo maximus*) *'Of rare and accidental occurrence* (in Britain). *Many records doubtless refer to specimens escaped from confinement, as the bird is often kept in aviaries, and not unfrequently breeds in captivity. It is therefore difficult to determine whether the Eagle Owls which have from time to time been recorded, have actually wandered to Great Britain, or have been escaped individuals. Some undoubtedly wild birds have, however, been taken* (killed) *in the Orkneys and Shetland Isles, on the mainland of Scotland, and in some parts of England; **so that there can be no doubt that the bird occasionally visits us from the Continent**'*.

- The famous ornithologist T.A. Coward (1919) in his description of the Eagle Owl wrote *'The northern birds migrate in winter, and probably those which reach the Orkneys, Shetlands and Scotland are wanderers from Scandinavia'*.

- Writing in what was once regarded as the 'bible' for all serious British ornithologists – '*The 'Handbook of British Birds'* (1946) Bernard Tucker commenced the Eagle Owl section with the words *'Large size and long conspicuous ear-tufts distinguish it **from all other British owls'*** (our emphasis**),** and in the **Distribution** section the revered Harry Witherby states: - 'G*reat Britain. 'Very rare vagrant. Being frequently kept in captivity suspicion rests upon a good many recorded occurrences'.* We have no problem with this latter cautionary remark. All of us agree that Eagle Owls have and do escape from captivity from time to time, but this does not mean that **every** individual observed and recorded in history can be placed into this category. For instance Witherby goes on to list Yorkshire, Lincolnshire, Oxfordshire, Derbyshire, Shropshire, Sussex, Hampshire, Dorset, Devon – and

significantly, once again the Shetlands, Orkneys and Argyll - as places where this species had been recorded in the wild, adding *'a good many others recorded as seen', suggesting that the others had been 'taken', i.e. shot by collectors.* Their co-author H.F.C. Jourdain even describes the food taken by this bird **in Britain**, i.e. *'The only British records refer to rabbits and water voles'.*

- The renowned and much respected ornithologist James Fisher, in his new text for 'Thorburn's Birds' (1974) wrote of the Eagle Owl *'Generally resident with a tendency to wander. A very rare vagrant to England and Scotland, October – May'.*

- To bring such records into the present day, we need look no further than the new edition of *'Collins Bird Guide'* (2010) (written by four of the most respected ornithologists of the day, and listed by the Natural History Book Service as its best seller) which has seen no need to change its entry for the Eagle Owl from that of its wording in its 1999 edition i.e. *"Only a handful of* ***genuine*** (our emphasis) *records in Britain, all in the 19th Century'.*

There are other examples we could quote, with 15 of these again being before there were any records of the breeding of this species in captivity, and, dating from as far back as 1684 (for a full list see Turk 2004). Significantly, 5 of these were of birds seen or 'taken' on either Shetland or Orkney.

This we would have thought should be more than enough 'evidence' to allow even the most blinkered of eyes to accept that immigration from Scandinavia and Europe has taken place from time to time and permanent residency is more than possible. Yet the BOU RBBP, the committee which has the last word on which category birds seen in Britain are placed, appears to have disregarded this evidence when deciding in which category to place the Eagle Owl. In 1996, having carried out what they termed *'an extensive review of the 90 or so reports of this species since 1684',* they concluded unanimously that *'many of the descriptions (where available) were not adequate to prove that the eagle owl was the species concerned. Of those where the Committee accepted the identification as eagle owl, members were equally united in* ***believing*** (our emphasis) *that the possibility of escapes and releases could not be dismissed'* They therefore removed the Eagle Owl from its former **Category B** status i.e. 'Species which were recorded in an apparently natural state at least once up to 31 December 1949, but have not been recorded subsequently' and placed it in **Category E -** 'Species which have been recorded as introductions, transportees or escapees from captivity, and whose British breeding populations (if any) are thought not to be self sustaining'. However, they went further, placing it in **Category E* -** 'Species in Category E which have been recorded as nesting with their own kind, and known **or presumed** to have originated from a captive origin'. **Species on Category E or E* form no part of the British List.** In defence of their decision the RBBP went on to say *"There is no evidence that this species has occurred in the wild state in Britain and Ireland for over 200 years'.*

We would respectfully ask "on what scientifically-proved basis was this *belief* based?" What evidence did they have of possible captive origin of the birds recorded? If we 'ordinary' birdwatchers 'believe' we have seen a non-native species in the wild in Britain, will the RBBP simply accept it? We think not! More likely they will turn it down on the same basis as their refusal to accept unringed, unjessed Eagle Owls observed to be breeding in Britain in suitable habitat and behaving like wild birds, as possible wild birds? i.e. "It **could** be an escape or deliberately released bird" which seems to have become their stock answer to this question when it concerns an Eagle Owl. If this is the case, why then do they happily include on the British List **Category A –** 'Species which have been recorded in an apparently natural state at least once since 1 January 1950', the Eurasian Scops Owl *Otus scops*, Northern Hawk Owl *Surnia ulula*, Tengmalm's Owl *Aegolius funereus* and Snowy Owl *Bubo scandiaca* – all of which are kept and bred in captivity in Britain (the latter extremely commonly) and have been recorded 'in the wild state' less often than the Eagle Owl since January 1950? To refer to the Tengmalm's Owl as a case in point, the famous Hancock Museum in Newcastle lists two specimens of this species in their collection, both 'taken' in the north-east of England – a bird shot at Rothbury, Northumberland in 1849, just twenty miles from the North Sea, and another shot at Whitburn, Tyne & Wear, in 1848, **right on the coast –** very unlikely habitat for this forest-haunting owl we would have thought. We therefore remain puzzled as to why a dumpy, short-winged species such as this, is apparently readily accepted as a genuine 'self-propelled' immigrant, while a powerful long-winged bird like the Eagle Owl is regarded as a virtual impossibility in the same context. The truth is, the present European distribution of the Eagle Owl, is now much nearer to Britain than that of the Tengmalm's Owl! Isn't this an indicator that the **real** concern is the Eagle Owl's size and its prowess as a hunter, rather than the possibility that it is an alien species??

Category A is where we contend the Eagle Owl rightfully belongs.

We also contend that far from there being no proven records of wild-origin Eagle Owls in Britain, they have actually been recorded since 1684, with c.20 records coming from the 18th C. and 19th C. alone. We do agree with the BOU that **some** of these records were poorly documented and rather vague – but we would stress**, not all!** To suggest this is we believe, ludicrous.

The west coast of Norway (a stronghold of the species) lies some 350km from Shetland, and c.400km from the Scottish mainland, which at first glance seems a very long way for such a heavy bird to travel. However, anyone who has witnessed at first hand the majestic wing and gliding powers of this bird could surely have no doubts about its ability to make such crossings – a fact accepted by the late, great Chris Mead of the BTO, as well as Roy Dennis, former Highlands Officer for the RSPB, who knows the bird well. What is more, the low wing-loadings (0.71) of the gigantic Eagle Owl and that of the tiny Scops Owl are virtually the same and indicate a high level of flight efficiency as well as the Eagle Owl's ability to glide easily and fly slowly for long periods at a time (Mikkola 1983). The Scops Owl does in fact arrive in Britain from time to time without ever being questioned as a genuine vagrant (nor should it be, for

one individual even made it to Papa Westray, Orkney in 1996). If a Scops Owl can make it to Orkney, why should anyone doubt that an Eagle Owl can?

We might also add that the much quoted Cramp (1985) himself describes the flight of the Eagle Owl as being *'powerful and fast and resembling that of a diurnal raptor such as the Common Buzzard. It can also soar on rising thermal's'* – behaviour observed and recorded by the late Duke of Bedford (a man who knew his birds well) over a Scottish wood in 1947 - a bird apparently in breeding display - but described by modern-day scientists as *'an obvious case of* misidentification'(presumably a Buzzard *Buteo buteo*).

A clue to a possible reason why observations of Eagle Owls have seemingly increased in recent decades came when the Trust was involved in the filming of ***'The Return of the Eagle Owl'*** shown on BBC Television's **'Natural World'** series on 16th and 20th November 2005**.** Following the showing of the film, our producer, Fergus Beeley received reports, backed up by photographs, of Eagle Owls resting temporarily on North Sea Oil Platforms, which are of course a comparatively new phenomenon, no doubt making the successful crossing of the North Sea even more possible.

We would also add that following the appearance of Trust representatives with an Eagle Owl on 'Schofield's Quest' (ITV) in 1995 (in a bid to obtain further records of wild Eagle Owls in Britain) we too received similar reports of Eagle Owls resting on North Sea Oil Platforms (including one in 1981 which lived on a platform for one month, feeding on Starlings *Sternus vulgaris* and pigeons). However, we have always treated these reports with caution in the absence of photographic proof, since it is well known that the very much smaller, but similar in appearance Long-eared Owl *Asio otus* is prone to do this during its regular nomadic movements between Britain and the Continent. However, whether this species would be powerful enough to habitually take adult pigeons (presumably lost racing pigeons) is altogether another matter, so a genuine immigrant Eagle Owl does seem the most likely answer.

It is also worth noting that France, the Netherlands (where it had never occurred before) and Belgium (from where it had gone extinct in 1983), all now have breeding Eagle Owls and are a mere stone's throw away from southern and eastern England - well within the capabilities of a dispersing Eagle Owl. The Dutch birds first arrived in 1997 and were believed to have come from Belgium and Germany (where its population had been reinforced after almost dying out). We were somewhat surprised to find this so-called 'wilderness' specialist settling in Europe's most densely populated (and very flat!) country, and evidently breeding quite happily in working quarries in lieu of its favoured cliffs – thus shattering the myth that it shuns the close proximity of Man! By 2007 there was an estimated 7 pairs breeding in Holland but studies suggest that the number of available quarry nest sites will in the end, decree how many pairs can ultimately nest successfully in that country – a lesson for British legislators to learn. Food and nest site availability will also control the numbers Britain can hold – without any need for 'management'.

Coincidently, following a television debate on the status of Eagle Owls in Britain ('North Country', BBC 'North East', 1983) the Trust received a letter from Flight Lieutenant R.R. Gee D.F.C. (Ret'd) who quoted this entry from his personal flying log written in July 1950 when he was flying his Anson aircraft out of RAF Usworth, at Kirkwall, Orkney: - *"We landed at Kirkwall at 4.05 hours and left the aircraft on the hard standing. On approaching a wire fence on the way to the Mess I noticed a large bird perched on a post. It definitely had the face of an owl, but my reactions were 'it is too big for an owl'. When I was some 20 yards away it took off, flying very low and with a wing-span of some 5 feet. I then realised that it could only be an Eagle Owl. Plumage I recall was golden brown"*. He ends by saying *"That it was an Eagle Owl I have no doubt"*. An escaped captive-bred bird on Orkney? We think not.

In answer to the people who question why the Eagle Owl does not appear in British folklore, and as a further indication of the occurrence of the bird in Shetland and Orkney we would refer the reader to the Scottish Natural Heritage *'Gaelic Dictionary'* available on: - http://www.snh.org.uk/gaelic/dictionary/list.asp?start=A&end=1&lang=E which lists the Barn Owl as the '*cailleach-oidhche'* meaning 'old woman of the night', and significantly, another owl referred to as the *'cailleach-oidhche mhor'*- the '**big** old woman of the night'. It's name? The Eagle Owl! We therefore ask what we consider a perfectly reasonable question - "If this bird wasn't a familiar sight on Orkney and Shetland (and possibly the Outer Hebrides) why was it given a Gaelic name and included in the dictionary? And before anyone asks, yes the Barn Owl does sometimes arrive in the Northern Isles, and so far as these records are concerned we would also add that we are totally unaware of anyone ever keeping and breeding captive owls on Orkney or Shetland now or in the past, but if anyone can correct us on this we would of course be glad to hear from them and acknowledge our mistake.

We would also ask why, if Eagle Owls were not present in past times, the Scots Gaelic, Manx (*'Hullad vooar'*), Welsh (*'Tylluan fawr'; Tylluan eryraidd'* ; Cornish (*'oula bras'* and possibly *'erula'*) and Irish Gaelic (*'ri-ulchabhan'*) languages all have words for it?

All this surely refutes the regular claim made by the 'doubters' that the Eagle Owl is predominantly sedentary and so large and heavy that it would be incapable of crossing the North Sea or Channel to Britain - completely ignoring the fact that ringed juvenile Eagle Owls have been shown to disperse widely (up to 480km. and surmounting 300m. mountain ranges) across Europe e.g. in the Swiss Alps (Aebischer et al 2005), and have recently moved from Germany and Poland and started to breed in the Netherlands and Belgium. It is quite true that established territorial pairs, if undisturbed and unmolested, usually pair for life and maintain territory. However, this sedentary behaviour of settled adults does not mean that the same is true for dispersing juveniles. As Mebs (1992) and Glutz & Bauer (1980) have stated (in Voous 1998) *"young ringed at the nest move over 100km. as a rule, and some have turned up at distances of 200km or more. In years of food scarcity individuals from the northern-most populations wander south over considerable distances"*. Aebischer (2009) comments *"During dispersal, some young Eagle Owls can cover several hundred*

kilometres before settling, visiting many different places, habitats and regions", and "*high mountain ridges apparently represent no serious obstacles to juvenile dispersal in this species.* ***We conclude that wide-scale dispersal is an essential component of Eagle Owl population dynamics in the NW Alps and this spatial dimension should be accounted for in the development of any conservation policy****"*.

We hope these examples will once and for all put to bed the myth of 'sedentary' Eagle Owls being unlikely/unable to reach Britain. We could give more, but feel that those given should be enough to convince any fair-minded reader.

We have also noted the failure of the 'doubters' to mention the increasing occurrences of Snowy Owls – now confirmed as yet another heavy *Bubo* (Eagle) owl species – in places as far from its Arctic home as Cornwall, the Scillies and Tory Island, Donegal! It is also now regular in the Outer Hebrides and we have yet to hear of any claims that all these records 'probably' refer to 'escapes or deliberate releases'. Why the difference?

The possibility that Eagle Owls might sometimes make it over to Britain when they disperse from their natal territories in Scandinavia or Europe might well be supported by a paper due to appear in 'British Birds' in April 2010. Evidently an autopsy and a stable isotope analysis of feathers (reinforced by an examination of the bird's moult patterns) were carried out by Dr Andrew Kelly on a juvenile Eagle Owl found as a road casualty in Thetford, Norfolk in 2009. This examination revealed that the bird's juvenile feathers had a very low 2H/1H ratio which was significantly different from the new 'adult' feathers, suggesting that the bird had originated in an area with the same very low 2H/1H signatures. Comparisons with feathers from Norway and the Netherlands, as well as those from known escapes from captivity, suggests that such readings correspond with those found in Scandinavia, suggesting, but not conclusively proving that the bird may well have made it to Britain on its own.

At the end of the day it is probable that the controversy of whether Eagle Owls ever (or have ever) crossed over the North Sea unaided will continue to rage until the definitive proof of a Fennoscandian/European-ringed bird is found in the UK., and although Adrian Abischer (pers.comm.2010) feels that owing to the paucity of Eagle Owl ringing undertaken in Europe and Fennoscandia, it is unlikely that a ringed Eagle Owl from these continents will ever be found in Britain, we are still hopeful that the all-important European/Scandinavian-ringed bird will appear sooner rather than later and finally put this contentious issue to rest. Until then, given that stable isotopes ratio analysis (first used more than 70 years ago by geologists and geochemists to trace geomorphic pathways and palaeo-climatology) is now widely used in the fields of archaeology, anthropology, palaeo-ecology and contemporary ecology to study physiology, trophic level determination (important in the current debate), the tracing of food webs and prey selection (Duxbury & Holroyd 1997), we hope that when it appears, Dr. Kelly's paper will throw more light on the possibility of natural immigration.

Some people have questioned whether Dr Kelly's isotope analysis results could indicate that this was actually an escaped ex-British captive bird which had been fed on food obtained and imported from Scandinavia. We have explored this possibility, and while such food imports do take place from the Netherland and Belgium, so far as we have been able to ascertain there are no such suppliers in Scandinavia. If anyone knows different, we would be pleased to hear from them, but in the meantime we rule out this hypothesis.

RECENT HISTORY

The Trust's first breakthrough came in **1983** when pair of Eagle Owls with 2 young were reported to us near Dunkeld (P.Sherratt, *pers.com.*) ***. At first we had doubts about this sighting since we knew that the heather moors surrounding this area were a prime site for breeding Short-eared Owls *Asio flammeus*, and we were well aware that from above, one of these birds flying below you can look deceptively big to the untrained eye. We therefore invited the observers to our home and asked them (without us accompanying them) to try and identify the species they had seen as compared to any of the 5 regular British owl species we had on view (including Short-eared Owls). In no time at all they were back, pointing out the European Eagle Owls as the species in question, with the comment *"Well look at those eyes and the size of them. You can't really mistake them for any of the others can you"!* Still somewhat sceptical we then asked for a full description of what they had actually seen. Evidently two adult birds, one much bigger than the other – thus ruling out both Short-eared and Long-eared Owls - were seen on the ground adjacent to a forested area, with two well-grown but only half-feathered youngsters next to them. As the observers moved closer, the larger of the two adults suddenly spread its wings and glowered at them with **long** erected ear tufts and hissing and snapping its bill – the classic defence posture of a female Eagle Owl with young under threat. In these circumstances a Short-eared Owl would have taken wing and circled the intruders, barking with its distinctive alarm call. Nor could the tiny ear tufts of that species ever be described as 'long' – hence its common name. We were finally convinced! Frustratingly, when we travelled up to the site to try and find the birds for ourselves we failed to locate them, even though we knew we were in the right area – but our work in Perthshire had begun, though not as yet in earnest!

***** N.B. We now believe that a report given to us around this time, of a pair with an owlet in Sutherland (quoted in some of our past correspondence and publications), probably referred to this record, with the location misidentified.**

Unfortunately, our enquiries in Perthshire from then on into **1994** were frustrating to say the least. Although in the early 1990's our patron Lord Forteviot and the local CLA representative both gave us introductions to landowners with large estates, enabling us to chat with their agents, tenants, foresters and gamekeepers, we were (perhaps understandably) unable to persuade any of them to divulge firm evidence of Eagle Owl presence on their

land – though the way they carefully evaded giving away any exact locations after first admitting that they **did** know of their whereabouts, convinced us that almost certainly we were on the right trail! One gamekeeper even went so far as to admit that a pair of Eagle Owls were indeed present on his beat, but since he had been instructed by his employer to 'get rid of them' and hadn't done so because he admired the birds, he was now afraid he would lose his job and home if his employer found out because of our enquiries! However, our suspicions were probably right, for in the year following our Dunkeld report (1983) the BOU later reported what they believed to be the first ever recorded breeding of the Eagle Owl in the UK (Melling et. al. 2008, Toms 2009) when in **1984** a pair attempted to breed in a quarry in Moray & Nairn, less than 50 miles away from our location. Sadly, their single egg was found broken.

In actual fact the claim that this was the first known recorded breeding attempt by Eagle Owls in Britain, was incorrect. This event had occurred much earlier – in **1941** - when a pair attempted to breed near the Loch of Lowes, Talnotry, Galloway, in April 1941 (Watson 1988). Although it was reported that these birds might have been escaped individuals, no further information was given to enlarge on this, possibly making this the first case of British Eagle Owl ex-captive status 'supposition'!

The pair in Moray & Nairn did however manage to breed successfully in **1985**, rearing a single owlet having moved to a different quarry. Despite this success, disappointment was to follow when the breeding male was killed on a road in that September. Although the breeding female remained in the area for the following ten years to 1995, she failed to find a new mate and subsequently laid infertile clutches in at least seven of those years. This breeding could possibly be the birds sometimes reported as 'nesting on the Black Isle', but we could be wrong.

The next news we received of Eagle Owls breeding in the UK actually came from England, when in **1993**, just before the final demise of the Scottish breeding pair, attention switched to the Peak District where a clutch of 4 deserted eggs had been found by fieldworkers in Longdendale just north of Glossop. Sightings of Eagle Owls continued in that area throughout that year and again in **2000** and **2001**, giving credence to the possibility of successful breeding taking place unseen in that area, but frustratingly, without any confirmation. Interestingly a sick bird was found there five years later in **2006**, so the alternative possibility arises that this individual could have been a solitary female which had been resident in the area for the past 13 years.

It was Scotland's turn again when a lone male, possibly the owlet from the 1985 Moray nest was resident in the Loch Ruthven area of Invernesshire between **1996 -1998**, just 20 miles away from the former breeding site, but was not seen after 1998. Intriguingly, the BOU Rare Bird Breeding Panel record a different (?) male bird elsewhere in the Highlands holding territory in 1997 – 1998, with calling being heard between January – March 1997, and a nest scrape being found in **January 1998.**

By far the most exciting development in England came in **1997** when 3 owlets fledged successfully from a nest in North Yorkshire, the adults having been present since at least **1996.** A second nesting attempt was also made by another pair. It soon became clear that the female of the breeding pair was undoubtedly an 'escapee' or deliberately released former captive bird since when she first arrived she was wearing the remains of jesses around her legs. However, the male had no such appendages and could well have been a genuine wild bird. He certainly had no problem in preying on the multitudinous Rabbits which abounded near the nest area. It is always possible that the he may well have originated from an undetected successful breeding in the Peak District before moving up to the Yorkshire site via Bowland and the Yorkshire Dales/Nidderdale moorlands. In the light of what was to happen, this is by no means impossibility.

This pair was resident for the following ten years, and interestingly went largely unknown and unseen to all but a few people throughout this entire period, thus confirming the elusive character of a bird the layman expects to stick out like a sore thumb – and despite the fact that they succeeded in raising no less than 23 owlets successfully in all that time! Results per year were as follows: - 1997 -**3,** 1998 – **2,** 1999 – **2**, 2000 – **3**, 2001 - **0**, 2002 – **3**, 2003 -**3**, 2004 – **4**, 2005 – **3,** 2006 – **0**. The lack of breeding success in 2001 is easily explained – this was 'Foot & Mouth' year when access restrictions meant that the usual surveillance and policing of the nest could not be carried out – which gives food for thought as to the possibility of these magnificent predators surviving long-term in face of continuing bird of prey persecution.

From **1999 – 2002** a male held territory in Warwickshire (RBBP) and also in **2002** two more birds were reported, one from Norfolk and the other in the Highlands.

Elsewhere, in England, a strange case of a pair nesting on a balcony at Hatfield Country Club, Hertfordshire in **2002** (Toms 2009) seems bizarre in the extreme, and even we cannot imagine these birds being of wild-origin! No results are given regarding this attempt or the ultimate fate of the birds themselves.

From Scotland came the news that the RBBP had received records of a single bird seen at an unspecified site in March **2003,** and what was possibly the same bird was reported at a nearby site that August.

Back in England in **2003** the established Yorkshire pair fledged three young. Toms also reports a nest with 3 eggs on a rocky outcrop at a private site near Harrogate, Yorkshire. Evidently these eggs were removed and placed in an incubator (surely an illegal act?) but proved to be infertile. This seems likely to have been due to the absence of a male, since one was never seen at the site. The female was apparently helped by the supplying of supplementary food. This evidently solitary bird could well have originated from the successful North Yorkshire pair (just c.25 miles away), and may well give a pointer to the origin of birds which later turned up in Bowland, Lancashire

In **2004** two Eagle Owls were reported in a county in south-east England, one for three days from 30th January, and the other for one day in mid-May. A pair reported from this county might relate to these individuals (RBBP).

The regular Yorkshire pair reared 4 owlets, and just one of the pair reported in S.E. England in 2003 was present in the same area until April, but then disappeared. At another site a single bird was seen,

2004 heralded an exciting breakthrough in the North of England when several Eagle Owls were reported from the Forest of Bowland in Lancashire, just 45 miles south of the North Yorkshire breeding site. It has been suggested that Eagle Owls had in fact been resident in the Forest of Bowland since the late 1990's having been released after their owner tired of them, though there is no proof for this claim. Nor is there any truth in the long-standing claim that one of the owls from the subsequent breeding pair was seen to be wearing falconers jesses on one leg. If the story of their origin is true, then the current breeding pair could be second, or even third generation descendents from those birds, though the possibility of them being some of the offspring (and therefore siblings) from the prolific Yorkshire pair is certainly more feasible. Confirmation via the presence of a BTO ring would be needed before this possibility could be answered satisfactorily and no such evidence has so far been forthcoming, the mantra being to leave the birds strictly alone to hopefully breed undisturbed.

In **2005** Eagle Owls were again reported from S/E England in three different counties. One record was of a single bird heard calling, plus a resident territorial pair which was broken up when one of them was captured in September and placed in a zoo (surely another illegal act unless this individual was known for certain to be of captive origin?), with the other member of the pair subsequently 'disappearing'. Another report concerned two single birds seen in December, while the third county recorded a breeding pair raising 2 owlets successfully (Toms states 3 owlets from 'southern' England, which we presume refers to the same nest but with a difference of opinion regarding the number of owlets raised). Could the two 'singles' reported in the second county have been these two youngsters dispersing?

In Eastern England Eagle Owls were present at two sites, with at least two birds being involved.

Also in **2005** three single Eagle Owls were recorded from two counties in central England, one of them being a weak bird (ex-captive?) taken into care, and in the same county a second bird was present from October/November. Sadly, one of the 2004 owlets from the Yorkshire nest was found dead under power lines in Shropshire (and even more sadly this was to prove the last year this prolific pair were to breed together (see below)..

In March 2005 it was rumoured that a nest had been found in a Bowland valley, from which a clutch of 4 eggs may have been removed. However, once again we have no proof of this.

2006 seems to have been the year when Eagle Owl sightings began to become more common. Significantly, the BOU Rare Breeding Birds Panel reported that they had received a total of no less than ten Eagle Owl reports from seven separate areas, including two pairs (no doubt the Yorkshire and Bowland pairs) and an unmated female which laid eggs (not known to the WOT). All of these records were either in northern or central England and southern Scotland, the past history demonstrating that two of these areas were once the heartlands for Eagle Owls in Britain, along with Shetland and Orkney. We therefore believe (but cannot prove) that some of these sightings might well have been of genuine wild birds, very possibly some of the Yorkshire young.

2006 finally saw the big break-through we had been waiting for in Bowland. A pair of Eagle Owls finally took up territory in the same valley they had frequented for the past two years, and hopes were high that at last there would be a proven successful nest

It was not to be. The birds' presence first came to light on 14 April when large pellets and downy feathers were found scattered along a stony escarpment in a rocky gorge. A quick search revealed a nest on a flat ledge situated on a rock face. It contained 4 eggs, alas cold. No adults were seen. This was worrying, for in the weeks previous, contractors had erected a stock fence directly above what had proved to be the nest site and it was feared that this had possibly caused the female to desert, for no adult birds were seen. On 24 April confirmation that this was indeed an Eagle Owl's territory, came when what was judged to be a male bird was spotted watching the fieldworkers from a Rowan tree in another gully. By this time the deserted eggs had been removed for analysis as it was hoped to find out whether the eggs had been laid by a single female, or whether they were fertile. If the latter was the case, it would of course prove that a **pair** was in the territory. The eggs **were** indeed fertile.

On 29 June a lone fieldworker taking a look around the area, was suddenly attacked by a pair of Eagle Owls, the female giving his rucksack a hefty blow which nearly toppled him over! Such aggressive behaviour could only mean one of two things – somewhere nearby at least one owlet was hiding, or the bird was upset because someone or something had removed her young. This was more or less confirmed when an empty nest scrape was located some yards away. The fieldworker quickly left the birds in peace, not wishing to cause any more disturbances, and in the hope that an owlet(s) were somewhere near.

Three weeks later the female was seen again, and once more gave an impressive threat display before being attacked by a juvenile Peregrine which eventually forced her to leave. That she was still acting this way after three weeks, was again suggestive that she still had young hidden somewhere. Unfortunately, despite their strong suspicions that this had been the case, the fieldworkers were unable to confirm that any owlet had fledged successfully from the second nest.

However, that nesting had already occurred before 2006 was suggested when the decomposed body of a dead Eagle Owl was found under what appeared to be an old stick nest made on the edge of a small woodland by another species – possibly a Buzzard.

2007 in Bowland brought success when 3 owlets fledged successfully from a clutch of 4 eggs, all three being BTO ringed. This breeding success was greeted as a triumph by those involved with the bird's protection, and the news soon hit the Birdwatching and media headlines, creating a problem of disturbance to the birds themselves, and public safety for the landowners, United Utilities, due to the determination of some selfish people to get close-up views of the owls from a public footpath. Some of them were foolish enough to take their dogs with them, with one unbelievably using his dog as a 'lure' in the hope of getting close-ups of any resulting attacks! Needless to say, the media had a field day when news of these attacks unfortunately hit the headlines, and inevitably, the 'anti-Eagle Owl' brigade' were quick to jump on the band-wagon in order to stress the dangers of Eagle Owls at large in the British countryside (see below, **THE EFFECT OF NEGATIVE PUBLICITY)**. Fortunately the nest was put on a monitoring watch and the owlets fledged successfully at the end of June and were BTO ringed.

Intriguingly a second nest containing 4 eggs, two of them broken, was also reputed to be that of an Eagle Owl, having been found just half-mile away from the successful nest. However, there was no sign of any owls so the mystery of whether two pairs were actually present in the valley has remained unresolved. What **is** certain is that there were reports of Eagle Owls in other areas of Bowland, so hopes were high that this initial success would be the precursor for a small breeding population – possibly becoming a revenue earner for local businesses and traders, as well as a 'Mecca' for owl lovers and researchers. If it could work for Ospreys, it was reasoned that it could surely work for such equally charismatic birds as Eagle Owls.

In 2007 another pair's behaviour elsewhere in Northern England strongly suggested that they had young nearby (RBBP).

2008 continued the success story in Bowland with 2 owlets fledging from a nest again with 4 eggs, and the suspicion that more than two birds were present in the valley, possibly at least one of them being a last year's youngster? The failure of two of the eggs remains a mystery, but could have been caused by contamination following the marking of the eggs with a felt tip pen by the police, ostensibly to try and deter egg collectors. Once again, the owlets (believed to be a male and a female) were BTO ringed.

The year was marked by what seemed to be good confirmation that at least one other pair had bred successfully elsewhere in Bowland, and overall, Melling et.al. (2008) suggested that Eagle Owls were maintaining a small presence in at least Northern and Central England, and perhaps in Southern Scotland, with a maximum of three pairs nesting in any one year.

2009 saw the World Owl Trust becoming more closely involved with the Bowland Eagle Owl story, due to problems arising between the parties connected with the conservation of birds of prey in Bowland. These problems had arisen for a variety of reasons, but one of them concerned last year's marking of the Eagle Owl eggs. As stated, this was thought to be a possible reason for the failure of 50% of that clutch.

Following the failure of the owl's first attempt (in February/March) to breed in 2009 when 3 eggs were deserted due to disturbance (again believed to have been caused by a police search for the nest in order to mark the eggs), relations between the parties had reached a new low. More concerns had been expressed when a new nest with 2 eggs was found nearby, two weeks later. Two meetings were hastily called in a bid to get assurances that this time the nest would be left strictly alone until any resultant owlets were old enough to ring. It is well known that the European Eagle Owl, big as it is, is very prone to desert its nest if it is disturbed at the incubation/early brooding stage (as had evidently happened at the first nest). The Trust was extremely anxious that the pair should not fail again, for this could have resulted in bad publicity for the UU Estate if the birds deserted again and perhaps left the valley entirely as an unsafe place to breed. This procedure was finally agreed and a single owlet fledged in May/June after being BTO ringed. Although we were pleased at this minor success after the initial disaster, there was increasing concern about the evident downward trend in owlet production over the three years of breeding, (i.e. 3,2,1)

This descending production rate is certainly not down to a lack of prey. Rabbits still abound, as do gulls and corvids. The Trust therefore hopes that 2010 will not only see the downward trend reversed, but also a better working relationship engendered between the interested parties.

Once again reports (and sightings by the fieldworkers) came in of Eagle Owl presence in other parts of Bowland and we would be very surprised if one or two pairs of these were not breeding. Our estimate of the possible number of breeding pairs in Bowland would be c.3.

At the other breeding site in Northern England, there was more success with three owlets fledging successfully, but with mounting suspicions that they were not welcome in some quarters. Again this site is bordered by a Grouse moor!

As we write (end of January/early February **2010**) the regular pair are back in their Bowland valley and already showing signs of being in breeding mode, and the northern pair are also holding territory.

THE EFFECT OF NEGATIVE PUBLICITY

In November 2006 the Yorkshire breeding pair mentioned above were the subjects of a very fine film ***'The Return of the Eagle Owl'*** (Spider Films, BBC TV) in which the World Owl Trust was proud to be involved. The film included an extremely well balanced debate fronted by Roy Dennis, former Highlands Officer for the RSPB and now a much respected freelance conservation consultant with a wealth of knowledge on birds of prey and owls as well as a host of other species. Roy went to great lengths to explore the pro's and con's of Eagle Owls breeding in Britain and came out very firmly on the side of the Eagle Owl being a legitimate member of our fauna with the

capability of arriving on our shores without assistance from Man. Quite rightly he also drew attention to the basic truth that predators predate, this, in his own words being *"just nature"*. Nobody in their right mind would dispute such a sentiment but because not everyone agrees, we will discuss this matter more fully later under **THE EAGLE OWL AS A PREDATOR**..

It is worth mentioning again for the benefit of those who still consider this species to be sedentary despite the evidence we have attempted to give to the contrary, that all the Yorkshire-born owlets were BTO ringed, with one taking up residence in Scotland from November 2004 into 2005, and so far, three known to have died. One hatched in 2004 had travelled 130 miles south before being electrocuted on power lines in Shropshire in 2005; while another 2004 owlet was shot by a gamekeeper c.103 miles north in Peebles, Scotland in 2006 (along with 18 Buzzards); and the third was also shot on a shoot near Masham in the north-east of Nidderdale, North Yorkshire, just 12 miles from its natal birth place. The fact that two were shot and one electrocuted suggests that mortality in Britain is likely to follow that of Eagle Owls in Europe and Fennoscandia. It is also worth mentioning that as wild-born youngsters all 23 owlets are legally classed as 'wild' individuals, as is any other wild-born bird species, no matter what the origins of the parents. As such they are protected under the EU Birds Directive as well as the UK Wildlife & Countryside Act 1981, which means that if the young are still dependent it is illegal to destroy their parents, even if they are known not to be of wild provenance. This raises an interesting point should the Risk Assessment now in progress, result in a call for a cull!

We mention this for a good reason. Tragically, the Eagle Owl film, instead of being hailed as wonderful confirmation of the Eagle Owl as one of Britain's most breathtaking breeding birds, was to have terrible consequence

Unbelievably, a representative of the British Ornithologist's Union stated that in his opinion *"since these birds are a non-native species and aliens, they are not protected by law"*. Unbelievably, when questioned further about this he went on to confirm that *"anyone can smash their eggs or kill the birds themselves"* – thus showing his ignorance of the Acts*** which give protection to **all** wild birds in Britain,

***** Basically the UK Wildlife & Countryside Act 1981 provides statutory protection for all wild bird species in Britain and prohibits the killing, injuring, taking or selling of any wild bird or their nests or eggs, whether they are native or non-native to the UK, and licences are required for any control measures** (verified in **British Birds** 100; November 2007; 638 – 649).

Perhaps even more importantly the EU Bird's Directive relates to all naturally occurring birds in the wild WITHIN THE EUROPEAN TERRITORY OF THE MEMBER STATES TO WHICH THE TREATY APPLIES (including the UK). This includes the birds themselves, their nests, eggs and habitats. Keeping the eggs, even if empty, and the deliberate disturbance of birds, especially during the breeding and rearing seasons, constitutes an offence.

Horrified, the WOT and others hastily notified the BBC of this serious error and the statement was retracted for the second screening – alas, too late!

These irresponsible words had obviously registered in the mind of some individual who wanted to see the back of the owls, and just a few weeks later, in **January 2006** the breeding female was found shot in the sternum. The evidence suggests that she had not been killed outright, but because of her injuries she had been unable to hunt. Her stomach was completely empty and she had ultimately succumbed from her injuries and inevitable starvation, bringing to an end what should have been one of the most exciting ornithological events in Britain for years.

This was proof positive (not that proof was needed!) that these birds arouse widely differing reactions from a widely differing range of people – unfortunately including some conservationists, scientists and conservation organisations. It is also another reason why we fear a legal cull would undoubtedly encourage a further expansion in the already increasing problem of bird of prey persecution by those who wish them ill. With the RSPB currently calling for people to sign their 'Bird of Prey Campaign' petition to outlaw such persecution, we find it difficult to understand why they would then be party to a Risk Assessment which includes the possibility of a cull of the Eagle Owl in Britain.

The fate of the Yorkshire female is a classic example of what is likely to happen if such a cull is sanctioned, for the perpetrator of this deed may well have been the same individual who smashed or removed the eggs on at least three previous occasions, once deliberately trampling a clutch despite the owlets being almost at the hatching stage! It is worthy of note that the only year this pair failed to rear young before the female's death, was 2001 when the foot and mouth outbreak precluded the usual surveillance and policing of the nest. Although the adult male lingered on and was seen copulating with a new female (probably a daughter) in April 2006, there was no subsequent breeding before the birds finally disappeared in 2008. A very aggressive, difficult to handle bird found in Birmingham, was ringed and released in the Yorkshire nesting area in May, staying for just two days before disappearing. This raised the question as to whether it was another male which had been driven off by the resident territory holder. With a possible 20 progeny out there somewhere, it is hoped that one day this story will have a happier ending.

We cannot leave the subject of the film without relating one or two incredible statements made by participants regarding Eagle Owls in Britain.

"It is big, powerful, and has glaring orange eyes and can scoop dogs, cats, deer and even sheep off the ground …… …" (**Radio Times, in their preview of the film).**

"Eagle Owls would certainly take anything they wanted to, for example lambs, cats and dogs and I can't see a happy ending to Eagle Owls in Britain" (**an artist/author of a book about owls).**

*'Eagle Owls might wipe out breeding waders, Merlins, Hen Harriers, and Black and Red Grouse'***. RSPB representative**.

"What if Eagle Owls developed a predilection for Corncrakes". **RSPB employee in Scotland.**

The latter pronouncement especially needs no further comment from anyone with even the slightest knowledge of predator/prey relationships! Nor was this the first time this particular person had given us the benefit of his wisdom. On a **'Wild About Britain'** blog in **January 2005**, following sightings of Eagle Owls in Scotland, he was quoted as saying *"they are very adaptable when released into the wild because they have quite a cosmopolitan diet, feeding on small deer or dogs, their favourite prey being Hedgehogs"*.

While it is perfectly true to say that this owl **will** take Hedgehogs *Erinaceus europaeus* at times, this statement and the mention of it taking dogs suggests more than a hint of deliberate 'anti-Eagle Owl' propaganda in order to whip up hysteria amongst worried dog owners and lovers of Hedgehogs! In Britain and those European countries where they are abundant, (e.g. France and Spain), Rabbits are invariably the main prey taken by this species and are probably the key to their distribution in these countries. In the Czech Republic fieldworker Terry Pickford has also been able to visit nests which contained **small** Red Fox *Vulpes vulpes* cubs as prey throughout the past thirty years (also recorded by Blodel and Barden in France (1976) – something we believe that would be welcomed by moorland keepers!

On the BBC News website in **January 2005** the RSPB's Scottish representative again pronounced that *"while there **have** been sightings of European Eagle Owls, but* (there have) *also* (been) *others from the US"* (actually a single Great Horned Owl shot in Derbyshire in 1828, and two other undoubted escapees in Oxfordshire and Sheffield in 2004) *and Russia"*. The latter – presumably *bubo* but possibly either *sibericus* or *ruthenus* which are of course other subspecies of *Bubo bubo* – could well have been genuine immigrants). His final offering was *"Evidence that the Eagle Owls are native to Britain and were here in the first place is weak and tenuous. They are great birds in the right place, but that place is not Scotland"*. We highlight the latter, because Graham Madge, also of the RSPB, took a somewhat more open-minded stance in an article in the Daily Telegraph (**February 4 2006**) following the shooting of the Yorkshire female. Madge quite rightly said *"If they* (the Eagle Owls) *have been accidentally or deliberately introduced, we should be very cautious. The record of introduced species is not good and we shouldn't do anything to help. **However, if they are wild birds starting to colonise, then it's a natural process and we should be delighted".*** At last, a sane voice, but one which at the time left us wondering what exactly **was** the stance of the RSPB over these increasing sightings and breedings. It seemed somewhat ambivalent to say the least.

THE EAGLE OWL AS A PREDATOR

It is clear that one of the major concerns (if not **the** major concern) of people opposed to the presence of Eagle Owls in Britain is this bird's role as a large and powerful generalist and adaptable predator. This is exemplified in the report *'The Status of Scarce Non-native Birds and Mammals in England'* by Parrott et. al. (2008) which in Section **8. Eagle Owl** quotes the RSPB's view that *'Irrespective of the provenance of eagle owls, a concern over their presence in Britain is their potential detrimental impact on the conservation status of a range of native species through competition or predation'*. That it fully fits our description above is not in doubt – but of course it is a description which applies equally to a whole raft of other predators, including we might add, the White-tailed Sea Eagle *Haliaeetus albicilla*, which has (rightly) been reintroduced to Britain with great acclaim by the very people who are now expressing their concerns about the possible effect of Eagle Owl predation on native fauna and their environments! And yet in August 2009 the '**Scotsman'** website published the following statement under the heading ***'Releasing Sea Eagles into the wild seemed a good idea, but there is one key flaw … they love killing other rare animals': -*** *"Sea Eagles reintroduced to Scotland have been enjoying a diet that includes threatened species such as Short-eared Owl and Puffin, a survey has revealed. Volunteers have been examining the contents of the nests of the giant birds on the Western Isles over the past two years. Members of the Outer Hebrides Bird Group discovered that the most common food eaten by the bird of prey was seabirds, particularly Fulmars.*

However, remains of Mountain Hare, Puffin, Short-eared Owl, Raven and even Red Deer were found on the nests. Fragments of lambs were also discovered by the volunteers, whose findings are recorded in the 10th Outer Hebrides Bird Report, funded by Scottish Natural Heritage.

A spokesman for SNH said he was *"surprised by some of the rare species in the Sea Eagles' diet"*, and went on to say *"there are plans to carry out further research to find out more about what they eat"*.

Interestingly, in contrast with their (then) official statement given above, another spokesman for the RSPB, Scotland, insisted that despite the above concern *"the Sea Eagles were unlikely to pose any threat to the populations of threatened birds such as Short-eared Owls and Puffins. A Sea Eagle doesn't recognise the protection orders that are given to various other species. They are opportunistic predators. If they see an opportunity, they will exploit it. Generally, you will see that they take sea birds, largely Fulmars and Gannets. But other species will form part of their diet and they won't be averse to taking a few Puffins.* ***It's part of the balance of nature****"* – a statement appearing contradictory to fears over Eagle Owl predation.

The article goes on to record the prey taken by the Sea Eagles in the study. As well as the afore-mentioned species the following were found in the nests: - Mackerel, Lumpsucker, Dogfish, Red Deer, Mountain Hare, Lambs, Brown Rat, Raven, Short-eared Owl, Great Black-backed Gull, Greylag Goose and Eider Duck.

Also mentioned were the concerns of farmers in Gairloch, Wester Ross, who blamed the birds for the loss of 200 lambs – a charge sometimes levelled at Eagle Owls as potential lamb predators, most recently in the Risk Assessment itself. i.e. **1.18. Q. 'Could the organism as such, or acting as a vector, cause economic, environmental or social harm in the Risk Assessment area?**
A. *'The species has been known to take livestock (lambs) although this appears to be a rare occurrence (Cramp et.al. 1985)'.* It certainly is!

This possibility was in fact a concern for the World Owl Trust when we first began our researches into the European Eagle Owl, and the truth is we **were** concerned, for we realised that if the Sea Eagle could be brought to extinction in Britain due to having the label of 'lamb killer' attached to its reputation, it followed that a large and powerful predator like the Eagle Owl, if similarly accused, would probably share the same fate if this was found to be true. We therefore spent a great many hours in searching the literature for examples of lamb killing – and to date have only been able to find three rather vague references to lambs in prey analyses. The most convincing of these was listed by Mikkola (1983) in his Table 10. **Eagle Owl's diet during breeding season.** To quote: - **Sheep (lamb)** *Ovis aries (juv)* - taken in Norway and representing just 0.05% of the total diet! Nor was it stated whether this item was a freshly killed animal or one taken as carrion. Indeed, the Yorkshire pair had nested for ten years surrounded by sheep without a single lamb incident, and the mighty female was even filmed on one occasion being frightened from her rock perch by two small lambs which approached her!

Nor, we would suggest could the reintroduced Goshawk *Accipiter gentiles* be regarded as anything but the type of predator the Eagle Owl is i.e. '*powerful, generalist and opportunistic*. Uttendorfer (1952) records it taking 179 Long-eared Owls, 113 Kestrels *Falco tinnunculus*, 87 Sparrowhawks *Accipiter nisus*, 46, Tawny Owls *Strix aluco*, 42 Short-eared Owls, 16 Common Buzzards and 9 other raptors in Central Europe, and in one area of northern Britain (Kielder Forest) it created havoc in the resident Short-eared Owl and Kestrel population. And yet here again we have a predator which is (rightly) fiercely protected both in England and Europe by law. Predation is of course a natural part of life and ecological balance – the sentiment so eloquently expressed by Roy Dennis in the Eagle Owl film.

We cannot leave this section without drawing attention to another oft-repeated charge made of the Eagle Owl. A charge much loved by the media. We refer to the claim that Eagle Owls are a danger to domestic pets such as dogs and cats, and possibly children. Over the years the World Owl Trust has made a point of collecting every Eagle Owl press cutting and photograph we have found or been sent – and when one peruses them it is easy to see how the media has again and again hyped this aspect up for the sake of a sensational story. Let us quote some of the headlines:-

'Cat eating giant owls lead wildlife threat' **Daily Express April 12 1999 –** accompanied by a quote from a BOU 'wildlife expert' *'The Eagle Owl with its 6ft. wingspan, is strong enough to carry off domestic animals and even young*

deer. This owl and many other birds are threatening Britain's ecology and endangering our native species'.

From the **Daily Express** again 9 **February 2000** came the news that *'Owl most foul has the muscle to lift a Jack Russell'* with a sensational half-page full-colour photograph of an unfortunate terrier called Sophie a split second before being carried off by a magnificent Eagle Owl with fully outstretched wings, which is just inches away from the dog. The lady owner reported that *'the owl was very powerful and seemed to pick up my dog effortlessly. They disappeared into the distance with Sophie still screaming. I never thought I would see her alive again'.* However, there was a happy ending. Evidently the poor dog arrived back home 30 minutes later with two-inch deep wounds in her flanks caused by the bird's talons. With her safe return came a solemn warning from the vet who treated her – *'I am concerned that the bird may attack a child or someone walking a dog. These birds can cause a lot of damage'.*

On **9 September 2000** the much respected **Sunday Times** gave us the news that the *'Deadliest owl settles in Britain'* with the comment *'The Eagle Owl preys on birds, fish and land animals as large as small deer and wild boar. Its size means it could easily snatch a family pet and, **in theory a child**';* And yes, it **was** in the Sunday Times!

After a quiet spell a **January 2005 'Wild About Britain'** blog about Eagle Owls started off with the words *'Exotic owls so large they can catch and kill a dog or small deer are being deliberately released into the wild by people who believe they should be introduced into Scotland'.*

BBC NEWS/SCOTLAND took up the story and on their **website** of **25 January 2005** came the headline *'Killer owls spotted in Scotland'* with the obviously 'poached' sub-heading *'Killer owls which can attack dogs and deer and are threatening other wildlife have been spotted in Scotland'.* In the same feature **a** spokesman for the Scottish Society for the Prevention of Cruelty to Animals (SSPCA) repeated a story he had related on the previously mentioned blog *'I heard an escaped eagle owl some years ago plucked a Yorkshire terrier from a street in Perth, so they can quite easily eat dogs'.*

Not to be outdone **Cage & Aviary Birds, 12 June 2008** jumped on the band-wagon by pronouncing '(Eagle) *owls that escape in cities often resort to hunting family pets to survive'.*

And the 'scientific proof' of all this hysteria? The above lurid newspaper accounts backed up with computer generated photographs, unproven statements by 'experts', and despite one vague mention of a *'young dog'* (in Cramp 1985) we have found no such evidence of dogs being taken as 'prey'.

On **5 January 2005** we were excited to read a **Daily Express** report that a pair of Eagle Owls had reared two owlets in a secluded wood in 'Harry Potter' land (hence the paper's interest in the story) near Alnwick Castle in Northumberland. The newspaper's reporter, warming to his theme suggested *'If cats, foxes or deer go down to the woods today they had better beware: the giant eagle owl is*

on the prowl'. This article was accompanied by three excellent photographs of the real thing, including a splendid one of the Eagle Owl swooping down with outstretched wings – no doubt to catch its prey! Unfortunately for this story, it soon became obvious that rather than these birds being the 'real thing', the photographs was in fact the same one as shown in the **February 2000** issue of the Express, minus the dog 'victim'! Alas, this was almost certainly a case of misidentification – albeit still a good one - by the excited 'discoverer' of this hot news. She went on to say *'I heard a strange noise and saw a hollow in a tree. When I peered in, there were two baby owls looking back at me. They had strange -shaped heads with what looked like two little horns.* Although she is alleged to have photographed the birds in May, these were never shown, and although she described the parent bird as 'absolutely huge', we are afraid that what she probably saw were Long-eared Owls, which do occasionally (**very** occasionally) nest in tree hollows, Eagle Owls do not. There was no further news of the 'Harry Potter' Eagle Owls

We could go on, but will end with just one last example of distorted 'media - speak' – and yes, on **3 February 2006** the **Daily Express** was back again! This time with a **really** good one! The article (headline *'Attack of the giant owl'*) featured no less than four colour photographs, the main one showing an attacking Eagle Owl (described as '*the world's biggest owl')* digging its talons into its small victim, a Miniature Dachshund called Heidi. Evidently Heidi wasn't the only target. It seems that this bird had been terrorising other pets in a village in Norfolk, including two Flat-coated Retrievers, a Cocker Spaniel and an Ibizan Hound standing 30 inches high and weighing 30 kgs., not to mention the local rat and Grey Squirrel population (both of which incidentally cost the British taxpayer several £million to control!). The bird had reputedly even tried to get at the Ibiza Hound through a house window, so it was deduced that the bird had almost certainly escaped from an aviary – not a bad guess, for the pictures show a very obvious Indian (Bengal) Eagle Owl *Bubo bengalensis*, a commonly kept smaller bird than the European Eagle Owl, and one which is all too often mishandled, making them social misfits as this one certainly was. Fortunately the miscreant was eventually caught by a falconer who used the two retrievers as 'bait' to enable him to capture the bird by throwing a net over it! There remained one snag and one mystery to this episode. The snag was that having caught the Indian Eagle Owl its capturer then announced that he had lost his own Eagle Owl (species not specified) the same week and it had not yet been located! The mystery was how an Express photographer happened to be on hand at the very moment the owl struck Heidi before she was rescued by an 84 year-old pensioner who was photographed at the very moment he beat the bird off with his walking stick? We could also ask the same question of the 9 February 2000 picture!

And thus, the reputation of European Eagle Owl being a threat to domestic pets is assured!

We have not yet dealt with the claim that these owls predate domestic cats, When cats go feral (which is often) it is generally accepted that they then become perhaps the biggest threat of all to small UK native fauna. Fox (1995) stated that Britain's 7.5 million cats were estimated to kill 75 million birds and

135 million mammals annually. Now **that's** what we consider *'having a detrimental effect on the natural environment and its native fauna'* really means! To put this in perspective, for every single head of prey taken by a raptor, cats take 3,500 prey items; and for every one killed by a Fox, cats eat about 6,000! Mikkola's Prey Table 10 for Scandinavia and Central Europe presents cats as a figure of just **0.035%** of the total percentage of Eagle Owl diet in the breeding season!

Another concern for the Trust is that certain prey species appear acceptable while others are not. Do we really need to illustrate this by mentioning the on-going persecution of Hen Harriers *Circus cyaneus*, Peregrines *Falco peregrinus*, Buzzards *Buteo buteo*, Goshawks *Accipiter gentilis* and even Merlins *Falco columbarius* on Grouse Moors (confirmed by both the RSPB and Natural England in their latest reports), and Peregrines and Sparrowhawks near racing pigeon lofts and garden-bird feeding stations? Are we really going to decide on what can live or die on the strength of these judgements no matter how flawed they may be? And if so, where do we draw the line in the sand? Are we to cull Song Thrushes *Turdus philomelus* for killing rare snails or Ospreys *Pandion haliaetus* for catching sport fish? No, predation (life and death) is a necessary component of any healthy natural ecosystem – a lesson already learned the hard way in North American ecosystems such as the Yellowstone National Park where the Wolf had to be reintroduced to control herbivore numbers. In Scotland the elimination of large predators such as the Wolf and Lynx inevitably led to the exponential growth in the numbers of Red *Cervus elaphus* and Roe Deer, resulting in the failure of the Caledonian Pine Forest to regenerate after their depredations. This in turn leads to an increase in the deaths of untold starving deer in hard winters. Consequently, in the absence of their natural predators, huge numbers of deer have to be culled every year by human hand.

In stark contrast to official attitudes in Britain, the Eagle Owl in Scandinavia and Europe is now regarded as an important and welcome member of the natural fauna rather than a species to be controlled - or worse - eliminated. Such persecution and human-induced habitat loss certainly led to its decline in most parts of its range over the past century, and it is heart-warming that in recent decades this attitude has completely reversed and great efforts have been made to reintroduce it back into areas from where it had been lost, for example Sweden, Germany, Belgium, France and Switzerland. This has led to a gradual expansion into the Netherlands and even Denmark – and, we claim, the early stages of the recolonization of Britain. We must therefore ask the question *"If this owl really is, as claimed by some, a threat to local fauna and their environment, why would the reintroducers spend so much time and effort, not to mention the expense, in returning it to its former range"?* The truth is, the Scandinavian's in particular, look on askance at our apparent paranoia regarding this bird!

No-one contests the fact that it is all too obvious that some Eagle Owls have escaped from captivity in the UK over the years, but to use this as 'evidence' that **all** individuals currently present and breeding in Britain originate from this source is unsubstantiated in the face of evidence (unringed/unjessed birds, plus past written accounts (see above)) to the contrary). Until a ringed

European/Scandinavian bird is recovered in this country, it seems unlikely that any other evidence will ever be accepted by the sceptics, but until one side or the other can come up with 100% proof that their belief is right, we suggest that the European Eagle Owl *Bubo bubo bubo* should be re-admitted to the British List.

Great play is often made of the number of diurnal birds of prey and owls listed by Mikkola (which includes work carried out by Uttendorfer (1952)) as being taken as prey by Eagle Owls, but the use of a list of prey species known to have been taken in Europe and Scandinavia cannot be applied as evidence that this will happen in Britain. It is repeatedly claimed that Eagle Owls *'do not tolerate other birds of prey in their territory'* (Hoglund 1966; Sulkava 1966, Mikkola 1983, Cramp 1985, and Busche et.al. (2004) and repeated in the DEFRA Risk Assessment in answer to Q.7), but to imply that they deliberately go out of their way to kill any raptor or other owl species inhabiting their area is to seriously misinterpret the true picture. The much respected scientist/ornithologist Ian Newton (1979) stated that *'*(while) *Data such as these confirm the prevalence of predation on small and medium-sized raptors, they tell us nothing about the contribution of predation to the total mortality of a species, nor its role in population control'.*

Predation on other birds of prey and owls is not a case of 'intolerance', it is simply a case of diurnal birds of prey and owls often being very noisy in the breeding season, thus drawing attention to themselves and the food-begging calls of their young, especially at night in the case of owls, just when Eagle Owls are actively hunting. Similarly, many diurnal birds of prey are very vociferous and fearless in defence of their nests and this too makes them easy targets when they attract the attention of a hungry Eagle Owl. Diurnal birds of prey and owls (e.g. Buzzards, Peregrines, Sparrowhawks, and Long-eared Owls frequently situate their nests in full view, while Harriers, Short-eared Owls and some Merlins usually nest on the ground. In Europe some of these species often nest on or near to the same crags as those used by nesting Eagle Owls and this too obviously leaves them wide open to predation.

Recent studies have shown that the idea of deliberate predation on raptors and owls is to take a very simplistic view, and the real truth might be somewhat different. It all depends on where the Eagle Owl populations are situated, the habitat they live in and the prey species available. All these factors colour the species which feature in their diet, and what percentage of this they constitute. The question we need to ask is *"what prey do* ***British*** *Eagle Owls take, and where"* - and at this moment we cannot answer that question because the work has yet to be done! So to state findings derived from European studies in a British Risk Assessment renders the whole exercise invalid. Even in European samples, the variation is such that no overall conclusion can be reached.

Researchers such as Asmussen (2003) working in Germany, found that the Eagle Owl had little or no detrimental effect on populations of White-tailed Eagle, Peregrine Falcon, Raven or Common Buzzard (the latter a common prey item in the Netherlands where Rabbits are either scarce or absent). Willoghs (1974) reported *'very few birds of prey or owls'* in his prey samples from Norway, and named seabirds as the primary prey group. Thiollay (1968) found **no** birds of prey or owls in his samples from France, and below, we give data

from observations made during a study in Germany which backs up all these statements (Crease 2010).

On the other hand Busche et.al. (2004) also working in Germany, found that there was a significant decline in Goshawk density when Eagle Owls arrived in their territories. Brambilla et.al. (2006) working in northern Italy also believed that the proximity of Eagle Owls to cliff-nesting Peregrines, lowered the latter's productivity', while Underwood (1995) noted the sudden disappearance of nesting Goshawk, Peregrine, Sparrowhawk and Merlin when an Eagle Owl/ Eagle Owls were present. However, none of these reports document actually witnessed direct predation, or even evidence of this in pellet samples. In view of this we later give a possible explanation for these observations.

Part of the problem in this respect is the tendency for readers (especially opponents) to seize upon one aspect and stress it as of profound importance – and the repeated perceived effect of predation on birds of prey and owls (and of course gamebirds) is perhaps the classic example of this. We suspect that a large part of the blame for this attitude can almost certainly be laid at the door of Mikkola (1983) and his famed (infamous?) Table 56 (p.379) **'Owls killed by other owls in Europe'** and Table 57 (p.380) **'Diurnal Raptors killed by owls in Europe'**. Even a cursory glance at this Table reveals a far different picture than the one so often quoted. In actual fact bird species constitute only **35%** of the total diet of Eagle Owls sampled in Table 10 (p.354) **'Eagle Owl's % diet during the breeding season',** and Strigidae & Falconiformes (Owls and Diurnal Birds of Prey) actually come **bottom** of the seven genera listed, at **2.2%,** with Galliformes (Gamebirds) next to last at number 6 at **3.1%!**

Top of the bird prey taken in the countries sampled (Estonia, Finland, Norway and Sweden) were Laridae (gulls), Sternidae (terns) and Alcidae (Auks) at **9.2%,** followed by Anatidae (ducks and geese) at **8.7%,** 'Others' at **5.2%,** Charidiformes (waders) at **4.1%,** and Corvids (crows) at **3.3%.** Compare these figures with mammalian prey such as Vole spp. at **38%** and Rats at **11.1%** and one suddenly gets a new perspective. Just to illustrate the futility of drawing overall conclusions from such figures when trying to assess possible prey species in Britain, we would draw attention to the fact that since Mikkola's table was drawn from samples in Estonia, Finland, Norway and Sweden, the Rabbit does not feature at all, whereas in Iberia *(* for *Bubo, b. hispanus)* and southern France *(*for *Bubo b. bubo)* it is by far the main prey species and is probably the crucial factor in Eagle Owl distribution and abundance (Blondel & Baden 1976)!

Furthermore, Mikkola's own study of a pair of Eagle Owls in Kuopio, Finland, clearly demonstrates similar anomalies, including remarkable differences in the Eagle Owls' diet from one year to another. In good vole years these animals comprised up to two-thirds of the diet, whereas in poor vole years they constituted only **5% - 16%,** with the owls then concentrating their efforts on Brown Rats living on a nearby rubbish dump, these becoming the principal food item at **66% - 86%.**

In Norway coastal birds (ducks and sea-birds) and just a few mammals made up **51%** of the diet, whereas in Estonia the picture was completely reversed with the owls taking **83%** mammals, and **14%** forest bird species. Finland was similar to Estonia, while Sweden fell mid-way between Finland and Norway –

all of which proves just one thing – the Eagle Owl is a generalist, opportunistic predator like many other raptor species, and its dietary skills simply reflect that it can be either a dietary 'generalist' or a dietary 'specialist' depending on the relative abundance and accessibility of mammals and bird prey, and also depending on the ecological situation!

However, it would be wrong for us **not** to mention the number of diurnal raptors taken as prey by Eagle Owls in Europe (Mikkola Table 57) since this lists 327 Common Buzzards as the main species killed (as was illustrated in the afore-mentioned film for Dutch Eagle Owls). The next species' numerically were the Kestrel (194), Goshawk (56), Sparrowhawk (51) and Peregrine (22), but one of our biggest disappointments as keen members for over 45 years was to read of a senior and much respected member of the BTO staff make the comment *'we know they take a lot of roosting birds, including Buzzards and owls, and they could pose a threat to Merlins'***.** If he had done his homework properly he would have found that Mikkola only recorded **five** cases of Merlins being taken as prey in his entire European survey (hardly significant), while on Bowland the Merlin is doing well, even in the presence of breeding Eagle Owls.

As mentioned above, contrary to the popular view, Blondel & Baden maintained that in their study area of Provence in the South of France, the presence of Eagle Owls did not affect other raptor species such as Bonelli's Eagle *Hieraaetus fasciatus* and Egyptian Vulture *Neophron percnopterus* which also used the same rocky surroundings, but we again draw attention to the fact that Rabbits were freely available there, which could account for this.

The DEFRA Risk Assessment makes the point (**B 2:11)** that in addition to the owl and raptor species mentioned, the presence of Eagle Owls in the British countryside could affect native species of conservation interest such as the Pine Marten *Martes martes*, Capercaillie *Tetrao urogallus*, Curlew *Numenius arquata* and Red Grouse *Lagopus lagopus*, while Toms (2009) includes Peregrines in this list. Mikkola does indeed record the Pine Marten (presumably including in this he includes its close cousin the Beech (Stone) Marten *Martes foina*, a more southerly species also found in Europe). However, to balance things up a bit it should be borne in mind that both of these animals are serious predators of hole-nesting birds, including small and medium-sized owls. Mikkola's recording of the Pine Marten comprising just **0.03%** of the Eagle Owl's diet in Estonia, Finland and Sweden, hardly seems enough to suggest that this owl is a serious threat to the animal in Britain where its distribution is very limited indeed.

Although we fully accept that the 'Red Listed' Capercaillie has certainly been recorded as prey in Europe, whether this refers to adults or chicks, and to what extent it has actually occurred, is impossible to tell since individual bird species are not usually recorded by researchers (including Mikkola) as percentage ratios with respect to their importance in the Eagle Owl's diet. The same applies to Curlews and Red Grouse, and with respect to the latter it would be interesting to learn of the annual national shot bird 'bag counts' of this 'bird of conservation interest' from the UK's managed Grouse Moors. A touch of duplicity here perhaps? Not to mention the 'bag counts' of illegally destroyed birds of prey and their nests on these same estates!

We have to say that we find it ironic that on the day we completed this report (5 February 2010) the RSPB's Director of Conservation, Dr Mark Avery presented a petition bearing 210,567 signatures to the Wildlife Minister William Huw Davies, demanding an end to the killing of birds of prey. Dr Avery went on to say – '*"We have been impressed and inspired by the huge response to this campaign. That so many people felt moved to take time to add their names to our call for the killing to stop, gives it enormous weight. Like us they are rightly appalled that birds of prey continue to be killed in our countryside. While today's hand-in shows how strongly the public feels about the need to protect our birds of prey, there remains a minority who see them as pests to be exterminated"*. Indeed they do, and we therefore urge the RSPB to do all it can to ensure that they don't get their own way, especially if they are operating on or adjacent to land managed or owned by the Society! We would also respectfully like to make the point that many of the people who signed their petition also regard owls as 'birds of prey' too and will be equally appalled if decisions are taken to 'control' any of these by those charged with protecting them!

THE EAGLE OWL IN THE U.K.

In view of all of the above, it is our view that the paramount need now is to place on record our admittedly sparse knowledge of the diet of Eagle Owls currently breeding in the UK. These data are based on actual observations made at the three currently most studied nest sites in England, and are therefore very pertinent to this report and the DEFRA Risk Assessment.

The most comprehensive data so far comes from Major Tony Crease who for nine years kept watch over and monitored the successful pair in North Yorkshire. Crease was also fortunate in being able to make observations of Eagle Owls when he was stationed with the Army at Sennelager in Germany, even going to the trouble of providing artificial breeding platforms for them, placed in conifer trees. These were successful, giving him ample opportunity to see exactly what effect these owls had on other local fauna - research he continued at the Yorkshire nests. Tony reports (pers.com.) that in the area of the German Eagle Owl nests his Ringing Group annually ringed chicks at c.30 Red Kite *Milvus milvus* nests and 22 Goshawk nests, and that in the same area Osprey, Peregrine, endless numbers of Buzzards, Honey Buzzard *Pernis apivorus*, Short-eared Owl, Bittern *Botaurus stellaris*, White Stork *Ciconia ciconia* and the rare Black Stork *Ciconia nigra* all prospered. He comments that the variety of wildlife species there was in fact far superior to anything we now find in the UK. The writer of this report can confirm that this area was all that Tony Crease claims. He too was stationed in the same area in 1954/5 as a mobile Radar Operator with the R.A.F. and the wealth of wildlife (including his first ever Red Kite, Rough-legged Buzzard, Hobby *Falco subbuteo*, Crested Tit *Parus cristatus* and Black Redstart *Phoenicurus ochrurus*) was staggering – but alas, he cannot claim to have seen any Eagle Owls, for in Germany at that time they were only just hanging on in one area, Bavaria, with perhaps a residual population in Thuringia. While 'aerial stand-offs' were watched by Crease from time to time, there was no evidence of actual conflict, and as Tony observes, such behaviour is common to many raptor species.

At the territory of the Yorkshire Eagle Owls, Buzzard, Kestrel and Tawny Owl all bred within 150 yards of each other over a 300m. diameter, **with the Eagle Owl nest roughly in the middle of them.** No confrontations were ever witnessed between the species, and the Tawny Owls raised young every year in an artificial nest box just 100m. from the Eagle Owl nest. All owlets were BTO ringed. By far the most important prey was Rabbits, supplemented by a colony of Jackdaws *Corvus monedula* which shared the nest cliffs and foraged on the sheep walks. Also recorded as prey were Grey Heron *Ardea cinerea* and Grey Lag Goose *Anser anser*, both incidents being single records in a total of 25 years. Hardly significant, but we mention them for accuracies sake! Very importantly, this nest was surrounded by large numbers of sheep and their lambs, and not one encounter between the two species was ever recorded.

Tony Crease finishes his report with the words *"I have never been aware that the presence of Eagle Owls had a noticeable effect on the remainder of the avian ecosystem, and the Black Stork I referred to actually recolonised the Senne during the time the Eagle Owls and I were at Sennelager". If the Eagle Owls were such demons, the clumsy Black Storks breeding near by would never have had a chance".*

The diet of the Bowland birds has so far been found to be fairly limited, with Rabbits yet again providing the bulk of the prey, along with Pheasant (though nowhere near the number killed on roads after being released 'en-masse' for shooting!), Red Grouse *Lagopus lagopus* (1), Stoat *Mustela erminea* (1), Grey Squirrel *Scirius carolinensis* (1) and the previously mentioned Gulls (Common Gull *Larus canus* and Herring Gull *Larus argentatus*). As for the threat to other birds of prey and owls, Hen Harrier, Buzzard, Peregrine, Merlin, Short-eared Owl and Raven *Corvus corax* all nested in the area without trouble.

At the North of England nest Rabbits yet again constituted the main prey item, and it was noted (Miles (2010) pers.com.) that Hen Harrier, Peregrine, Goshawk, Kestrel, Merlin, Tawny Owl, Barn Owl *Tyto alba* and Short-eared Owl were unmolested in the general area of the Eagle Owl nest, Red Grouse are widely distributed, the endangered Black Grouse *Tetrao tetrix* population is actually increasing, and Pheasant, Mallard and Wood Pigeon all nested close to the owls, with a pair of Merlins rearing 4 young. So much for ecological mayhem!

We would also ask why, when observations made so far suggest strongly that Rabbits are by far the most important prey item for British Eagle Owls, would opponents of Eagle Owl presence in the UK even consider culling this species when Rabbits are estimated to cause c.£200 million worth of damage to UK Farming, Horticulture and Private gardens?

Before leaving these examples we must now refer to Mikkola again to record the fact that he cites both the Golden Eagle (4) and the White-tailed Sea Eagle (1) as killers of Eagle Owls in his Table 58 **'Owls killed by diurnal raptors in Europe'** (p.381)**! T**he Goshawk too was shown to be a threat to smaller owls, having been recorded as taking 317 Long-eared Owls, 100 Tawny Owls, 66 Short-eared Owls, 32 Little Owls *Athene noctua*, 26 Tengmalm's Owls, 13 Barn Owls (low because they hardly occur in Scandinavia), 10 Pygmy Owls *Glaucidium passerinum*, 2 Great Grey Owls *Strix nebulosa*, 2 Ural Owls *Strix uralensis* and 1 Northern Hawk Owl, a total **573 owls of 10 species** – not

exactly one-way traffic we would suggest! The Buzzard and Peregrine too were shown to be far from averse to a tasty owl or two! It is all relative – and natural!

A possible answer as to how the myth of the Eagle Owl's perceived 'intolerance' and 'deliberate elimination' of other raptors and owls in its territory has come about, has been revealed in a fascinating paper on research carried out in the Swiss Alps by Sergio et.al. (2007). Entitled *'Coexistence of a generalist owl with its intraguild predator: distance-sensitive or habitat-mediated avoidance?'* this paper is available online and shows that long-term coexistence of the intraguild prey (in this case the Tawny Owl) with its predator (the Eagle Owl) is actually a common occurrence. Evidently co-existence is achieved by predator avoidance rather than direct predation – the very antithesis of popular belief. What actually happened in this study was that when Eagle Owls were at low levels there was obviously a corresponding low risk of predation, so the Tawny Owls were indifferent to the occasional presence of the bigger owl. However, when Eagle Owl numbers built up to medium density, the Tawny Owls switched to distance-sensitive avoidance, hence the oft-repeated claim by fieldworkers that the Eagle Owl had 'deliberately wiped out' the smaller species' in their study area – assumed because the latter had 'gone missing' – which it had! It simply moved away from a threat! This probably accounts for the claim that Goshawks too had 'declined' in a German study area when Eagle Owls moved into their former territories (Busch et.al. 2004). When Eagle Owl numbers became high, thus decreasing the opportunity for the Tawny Owls to find safe refuges, the Tawnies began to deliberately avoid Eagle Owl habitats – which are very different from being deliberately predated! Not surprisingly however, the closer the Tawny Owls nested to a nesting Eagle Owl, the greater became the risk of being predated. Similarly, Tawny Owl nesting success declined relative to the closeness to an Eagle Owl nest. A hidden message within these findings is that when Tawny Owl habitats (refuges) are destroyed, negative relationships occur between the two owl species due to the Tawny Owl's increased difficulty in avoiding Eagle Owl predation. To avoid becoming prey, the Tawny Owls have little option but to move away. However, we repeat, this is **not** the same as Eagle Owls **deliberately** setting out to eliminate any competition for food, as has so often been suggested. It is just another case of 'opportunity making the meal' when the occasion arises! The disappearance of the Tawny Owls (and Goshawks) when they move away, has then lead researchers to the (wrong) assumption that they have been killed by the Eagle Owls. Quite obviously we are not trying to claim here that intraguild predation does not occur from time to time, Mikkola's tables make it quite clear that it does – with the vulnerable Long-eared Owl seemingly being the main victim.

The final words of this paper are the ones we would like to leave the reader with, for they are words every 'anti-Eagle Owl' person should digest, i.e. *'The spatial gaps in Tawny Owl distribution* (when they left the close proximity of an Eagle Owl nest) *indirectly favoured other owl species,* ***resulting in higher diversity of the overall owl community and suggesting that Eagle Owls acted as keystone predators'***. A somewhat different picture from that so often painted.

One of our main reasons for mentioning Mikkola's Table 57 is to draw attention to his figure for Hen Harriers taken by Eagle Owls in the countries listed in his analysis of birds of prey taken by Eagle Owls – **just 1**! We ask you to consider this figure for the simple reason that the Eagle Owl is frequently referred to as being a threat to British Hen Harrier populations (e.g. Toms p.410; Parrott et.al. (2008)). Hen Harriers of course are 'Red Listed', since they are well known to be in serious trouble due to persecution on Grouse Moors, and sadly, in 2007 Bowland's Eagle Owls were accused of killing a male Hen Harrier when a pool of white feathers were found near to their nest site. The BOU Report of December 2008 then pushed the number of victims up to 2, and in 2009 it was next claimed that the remains of a ringed female Hen Harrier from Wales and possibly another male Hen Harrier had also been found near the Eagle Owl nest in that season. These were said to have been collected and sent away for analysis to determine the cause of death. Unfortunately no such analysis results have ever been forthcoming, and no wonder - two theories since put forward to explain these events are that the dead female Harrier was in fact a 'plant' in order to 'give a dog a bad name' to justify the killing of the owls, and the other 'evidence' – the pools of white feathers - later revealed the real truth, confirmed by experienced ornithologists, raptor fieldworkers and a representative from Natural England. Rather than male Hen Harriers, the sets of white feathers with black tips which had been found were in fact those of a Common Gull and a Herring Gull (pink feet and all!). As we have previously mentioned, gulls are a commonly taken prey item for Eagle Owls in Scandinavia and Europe and as such, their identification should not have come as any surprise. Gulls roost socially on water bodies, nest colonially and noisily, and as predominantly grey and white birds, stick out like a sore thumb to nocturnal predators such as the Eagle Owl. Significantly the Bowland Eagle Owl territory is within easy reach of a very large reservoir – hence the presence of United Utilities as land-owners and guardians of one of the finest (if not **the** finest) populations of birds of prey in England. Other raptors in the area which could easily kill gulls were Peregrine and Goshawk. Worse, after the details of the finds were given to the Police and Natural England, the Police Wildlife Crimes Officer then proceeded to give the first misleading and inaccurate information to the **Shooting Times** – who promptly published the story as 'fact'!

Because of this, and despite the truth, the accusation that Eagle Owls are a threat to the much endangered Hen Harrier has persisted, and certainly this supposition has now become a much repeated 'fact' (including in the current Risk Assessment's answers to questions) despite the fact that it has been proved to be a false accusation. It is our hope that this report and the fact that Hen Harriers have their highest English breeding population in Bowland – at least where they receive protection on the United Utilities Estate – will help to put an end to this incorrect conception. We might also add that despite the presence of breeding Eagle Owls, and belying the fears of the gloom merchants, other species of raptor and owl apart from Hen Harrier are breeding and thriving on the UU Estate under the watchful eyes of dedicated fieldworkers and wardens, including Peregrine, Merlin, Short-eared Owl and Raven, with smaller numbers of Goshawk, Kestrel, Barn Owl, Long-eared Owl and Buzzard.

To sum up, to list every species which has been recorded as Eagle Owl prey would be both tedious and unnecessary. Suffice to say it can take any mammal

or bird up to the size of a full-grown Hare or Goose if the opportunity arises, and reports that it can take Deer, Foxes, Badgers, Wild Boar, Wild Cat, Chamois and Ibex, etc., should not be taken at face value. As Olsson (1979) has pointed out, '*Most larger mammals, even Hares, are usually taken as young individuals, and there is no firm evidence that Roe Deer for instance, are ever taken alive when full grown, or even half grown'.* It does **not** act selectively in this respect and it simply takes any right-sized prey which offers the opportunity, and this is why habitat and climate must be taken into consideration when trying to analyse 'effect' on other species and their environments. We therefore finish this report with a consideration of what possibility the modern-day environment of Britain holds for the continuance of the current very small breeding population of Eagle Owls and its chances of future expansion.

WHAT FUTURE FOR THE EAGLE OWL IN BRITAIN?

The final all-important question which needs to be asked and answered at this stage should not be *"what effect could an expanding Eagle Owl population have on the British ecosystem and its fauna?",* but rather *"**Can** the Eagle Owl actually survive in Britain",* and if the answer is *"yes",* then *"what long term future does it have"?*

The answer to the latter question lies in whether suitable habitat and food availability is still present in the UK; what human persecution it will face; and what degree of protection it will get once it starts being seen more regularly – especially when it appears on, or adjacent to shot-over Grouse Moors.

To deal with the last question first, we already know from the Yorkshire and Scottish debacles what reception they will get once found in such locations, and the portents aren't good from elsewhere, not least in the answers given to some of the Risk Assessment's questions! The fact that the RSPB has felt the need to mount a petition in response to the mounting persecution of birds of prey, speaks for itself, and the adverse publicity (as shown earlier in this report) – especially when being voiced by organisations the general public regard as the 'experts' - does not inspire confidence that the Eagle Owl will be well received by everybody, especially worried pet owners taken in by the lurid media hype.

Having said that, there is little doubt that the main threat to the bird will come from the game-rearing/shooting fraternity, and if anyone is in any doubt about the seriousness of this threat, let us quote the RSPB in their most recent report **'BIRDCRIME 2008'.**

'In 2008, there were 210 reported incidents of illegal shooting, trapping and nest destruction of birds of prey. This is lower than the 287 incidents reported in 2007, though above the last five-year average (179 incidents*). The most commonly reported crime was shooting, with 105 reports of incidents involving the shooting or attempted shooting of raptors and owls'. There were 28 reported incidents relating to destruction of birds of prey nests, eggs or chicks, and a further 77 reported incidents of other offences, such as trapping'.*

Since, as we have mentioned, the World Owl Trust is closely involved with events in Bowland, in particular on the United Utilities Estate which harbours what is probably the most successful breeding population of Hen Harriers in England, along with other charismatic species such as Peregrine, Merlin, Short-eared Owl – and Eagle Owl – readers will no doubt understand our concerns when we tell you that this comparatively 'safe haven' is surrounded by keepered Grouse Moors. Why are we concerned? Read on. To quote from the RSPB report again *'In 2008, Natural England published* **'A Future for the Hen Harrier in England?'** *the results from the first phase of its national Hen Harrier Recovery Project. Monitoring work since 2002 has shown that the critically low breeding numbers and patchy distribution of Hen Harriers in England is a result of persecution – both in the breeding season and at communal roosts in the winter –* ***especially on areas managed for Red Grouse shooting or with other game rearing interests****'. According to the RSPB 2008 (quoting figures from the Natural England Report), in England between 2002 and 2008, the comparatively tiny area of Bowland in Lancashire accounted for over two-thirds of 127 recorded Hen Harrier breeding attempts. Of the 72 successful nests which produced fledglings during the last seven years, 50 were in Bowland. In Bowland, 65% of nesting attempts were successful compared with only 26% of nests in other areas managed for Red Grouse shooting. Away from Bowland, only 19 breeding attempts were recorded on Grouse moors, in spite of large areas of suitable habitat. The Bowland Fells in Lancashire is a site of Special Scientific Interest and the only area where the Hen Harrier has increased in number as a breeding bird since 2002.'*

These figures speak for themselves, and what is more the report goes on to tell us exactly **why** Bowland is so successful: -

*'**This is largely due to sympathetic land management by United Utilities plc, with monitoring carried out by Natural England, the RSPB, and volunteer raptor workers**.'*

We have underlined the last four words for a very good reason. We are puzzled. **Very** puzzled! If Natural England really believes all the above enough to put it into a report and have it quoted by the RSPB, why then, in 2009 did their Wildlife & Management and Licensing Team write "*Increasingly, the external perception of the situation with raptors in Bowland is that* ***disturbance by licensed raptor workers is the main problem faced by these birds"*** in response to complaints from the North West Raptor Group (supported by the Northern England Raptor Forum)?

Not only is this totally untrue, it flies in the face of the fact that without these incredibly dedicated fieldworkers – who give their time freely in the cause of raptor conservation – the results on the UU Estate would undoubtedly mirror those of the bordering estates. The importance of this to the concerns we have over the current events surrounding the Eagle Owl in Britain, is that Bowland currently hosts Britain's most successful breeding pair (and possibly others) now that the Yorkshire story has ended. There is little doubt that if the game-shooting fraternity get wind of any doubts from 'above' as to the accepted status of the Eagle Owl as a protected species, they will undoubtedly see this as 'free rein' to dispose of them as they do all other birds of prey. Only with the 'eyes

and ears' of the fieldworkers can we ever hope to see Eagle Owls survive in their few strongholds.

Sadly, we have to report that despite all the effort being put in to protect birds of prey in Bowland and elsewhere, only 10 Hen Harrier chicks managed to fledge in the whole of England in 2009. Yes, we are worried – and rightly so! For 'Hen Harrier' read 'Eagle Owl' and you will see why!

This brings us to the final points – Habitat and Prey.

Although the various subspecies of *Bubo bubo* inhabit a wide range of habitats ranging from hot deserts to barren steppes and cold northern coniferous taiga, the **European** Eagle Owl *Bubo bubo bubo*, contrary to popular belief, is not a bird of dense mature forests. Its main pre-requisites are a safe nesting place situated close to an adequate food supply and a mosaic of differing habitats – which preferably include **some** open woodland adjoining open areas which afford the birds a good outlook. The proximity of water is common, but by far the most frequent nest sites are on ledges on cliffs, rocks, ravines, gorges or steep slopes. Nor does its territory necessarily have to be in wildernesses remote from human activities. Given the above important factors, we believe the most likely centres for any sustained colonisation by Eagle Owls in Britain would be in the hills and moorlands of Northern England, and Dumfries & Galloway, Argyll, Moray and parts of the Southern Uplands and Highlands of Scotland.

As mentioned earlier, Eagle Owls have now colonised the Netherlands, one of the flattest and highly populated countries in Europe, and we must admit to initially being somewhat baffled by this development. We wondered where such large birds could nest unmolested. We now know the answer - quarries - even working quarries! These of course provide the essential cliffs and ledges, albeit artificial ones. Such versatility means that where rocky terrain is absent, the Eagle Owl can make do with nesting against a tree, a stump or fallen tree, or even amongst/against large boulders.

In recent times, Eagle Owls inhabiting Fennoscandia have been observed to be increasingly nesting in cultivated areas dotted with human settlements (Mikkola1983), and this would suggest that further expansion in Britain might be possible, though the UK's ever increasing fragmentation of wildlife habitats with lack of connectivity, road systems, power lines (collision and electrocution) and windfarms will undoubtedly cause severe mortality if this occurs

Aebischer et.al. (2010) have suggested that a large reservoir of 'floaters' is necessary in order to ensure a stable demographic turnover, and these unpaired individuals might also be essential to enable this species to compensate for losses caused by such anthropogenic factors as we have listed above. They warn that to ignore the fate of this element of the Eagle Owl population might lead to erroneous conclusions regarding demographic developments.

From the admittedly sparse data we have been able to accumulate from the three breeding pairs with which we are most familiar, it would appear that the presence of good numbers of Rabbits is a key factor in determining where Eagle Owls can find a suitable territory for them to settle and breed successfully within the UK. Rabbit presence of course, depends to a large extent on a dry terrain in which they can create their warrens, and in Britain this vital food

source was much more common in the past than it is now. Ashmole & Ashmole (2009) explain how Rabbits used to be present in large numbers in the Southern Uplands of the Borders until in post-war years it became law to control them on farmland. The harsh 1947 winter then killed off large numbers everywhere, as increasingly did the myxomatosis virus in the 1960's–1970's, and more recently viral haemorrhagic disease. However, in some areas numbers have remained high, and we can well remember fields in Perthshire absolutely heaving with Rabbits when we first began our work in that area of Scotland – and coincidently, that was where we had our first record of Eagle Owls breeding in recent times! It is likely that climate change has also played a part in altering the distribution and numbers of this much exploited food animal for the Eagle Owl, though to illustrate just how important it is to not take an 'over all' view of the Eagle Owl's diet, we have illustrated how the Rabbit is by far the most important component of Eagle Owl diet in dry, sunny Iberia, but is totally absent in the diet of Fennoscandian Eagle Owls – simply because it doesn't exist in those cold climates! Another Eagle Owl prey item, the Brown Hare *Lepus europaeus* also seems to have decreased in some areas of late, including on the barren sheep-walks of Lakeland and the Southern Uplands of Scotland. Hares prefer a more complex mosaic of habitats than are found on over-grazed sheep-walks and these bare uplands are disappointingly devoid of heather cover – which in turn means an equal dearth of other potential prey species. These denuded hills, while undoubtedly offering suitable craggy nest sites, currently hold little attraction for Eagle Owls since they do not provide a sufficient enough food base to allow this large species long-term survival. While Field Voles *Microtus agrestis* are often present, sometimes in good numbers in the absence of grazing, as in new plantations in their early stages (e.g. Eskdalemuir in the past), they are of course cyclic, and as such are not sufficient alone to sustain a breeding pair of Eagle Owls and their young. Probably for these reasons, at the moment the few successful breeding pairs of Eagle Owls in Britain seem to be confined to the remote, steep and often rocky heather-clad moorlands so beloved by several other birds of prey, a habitat which unfortunately coincides with that of shot over Grouse moors. We fear this will inevitably lead to conflict with moorland owners and their keepers (yet another anthropogenic factor) as it already has with other birds of prey such as the Hen Harrier and Peregrine.

A welcome change of thinking has come about in recent years, with the conservation initiative of 're-wilding' areas that have been laid waste over the past few centuries. As an example of how this may well change the face of Britain's landscape in the coming decades, we would like to describe what is happening in the Southern Uplands of Scotland at this present time.

A far-sighted Environmental Charity called the **'Borders Forest Trust' (**BFT**)** and an incredibly dedicated sub-Group called **'The Wildwood Trust'** has for the past decade and a half recognised that the loss of trees and their associated biodiversity in the Southern Uplands of Scotland is comparable to that we mourn when tropical rainforests are destroyed (Ashmole & Ashmole 2009). Of course the accompanying loss of the natural ecosystem which once existed can never be restored in one person's lifetime, but these inspirational people (many of them working as volunteers) have nevertheless set out to start that process, with emphasis on the long gone 500 sq.km. ancient Ettrick Forest.

Early survey have shown that while upland species such as Wheatear *Oenanthe oenanthe* and Skylark *Alauda arvesis* decline as their preferred habitat of open short-sward grassland is replaced by taller vegetation and tree and shrub cover, woodland species are beginning to arrive in ever-increasing numbers. Roe Deer still have to be controlled to allow the young trees to survive and grow big enough to withstand their browsing and fraying, and there is an on-going problem with high Short-tailed Vole numbers causing damage. There is also some concern that Rabbits and Hares might be other species to arrive back and cause damage to the young trees before they become properly established.

To counter the latter problem some thought is being given to the possibility of reintroducing the small carnivores which prey on them (and the voles), but which were lost a long time ago when the forests disappeared. Wild Cat, Pine Marten and Polecat have already been mooted as likely candidates for the first reintroductions. It should also be mentioned that another organization **'Trees for Life** has, since 1989 been doing similar work over an incredible 2,370 sq.km. area of the Highlands of Scotland in a bid to restore the ancient Caledonian Forest. Their ultimate aim is to restore a natural forest of c.1,500 sq.km. – and this we suspect might well become the heartland of Eagle Owls in Britain in the long term. This belief is strengthened by the mantra of **'Trees for** Life' that the missing wildlife species such as eagles and kites should be reintroduced, and even the larger mammals championed by Roy Dennis at a BFT conference in 2003 when he rightly pointed out that carnivores such as the Lynx, Wild Boar and Wolf are natural components of a healthy northern forest system. In the context of this report we would suggest the Eagle Owl too is an obvious avian candidate for this role at some time in the future? Only with a full complement of predators can Britain ever claim to have restored the long-lost 'Wildwood'.

As we have pointed out, the three current breeding sites we have mentioned above have given no indication that the presence of breeding Eagle Owls has affected the numbers of other wildlife species, including raptors and owls, which share their environment. Nor has there been any evidence of attacks on livestock (even when newly born lambs are present) or domestic pets – with the exception of one or two attacks on dogs taken by foolish owners, too close to Eagle Owl nests containing young. In this respect the Eagle Owls behave no differently from nesting birds such as the Tawny Owl, some Buzzards, Swans, Arctic Terns, Skuas – and Capercaillie to name but a few!

SUMMARY

In eastern Finland Mikkola found that although paired Eagle Owls will change actual nest sites from year to year, they usually retain the same territory throughout. This also seems to be the pattern in Bowland, as well as the former Yorkshire pair. For the reasons given, we believe that any future spread (if any) within the UK will be small – possibly <100 pairs – though this is impossible to

quantify at the present time due to lack of sufficient data, especially of the claimed release programmes.

Given the probable mortality problems listed above, plus the large size of their territories (variable according to prey and nest site availability) it seems unlikely that the Eagle Owl will ever become a serious problem in Britain, and we would cite the fact that the Yorkshire birds nested virtually unknown to all but a few, as did the Bowland pair until the birding network and media drew attention to their presence.

We can find no evidence that Eagle Owls breeding in the UK either in the past or in the present have caused any environmental problems or seriously affected the numbers of other species sharing their environment. Nor have we found records of any of the 'species of conservation concern' listed in the DEFRA Risk Assessment, being taken as prey in Britain.

We have found no evidence of attacks on farm livestock, and believe that apart from one or two attacks on dogs taken too near to active nests, allegations that they are a threat to domestic pets are largely based on 'sensationalist' media hype.

Like many other organizations and individuals, the World Owl Trust has submitted its response to the Risk Assessment's conclusions, outlining in brief why we oppose its findings and contend that most of the answers given by CABI are either conjecture or represent data taken from European and Fennoscandia studies that are not relevant to Eagle Owls breeding in Britain. This response can be seen on our website **www.owls.org**

We believe that in this report we have given sufficient evidence to suggest that the European Eagle Owl *Bubo bubo bubo* is a legitimate candidate for listing as a native British species. The BOU's arbitrary interpretation of what does or does not constitute a native species, is at odds with archaeologists, palaeontologists and mammal scientists' interpretations (see Stewart 2007 and Yalden 2003), and also that published by DEFRA. Furthermore, their claim that the European Eagle Owl is an invasive alien originating solely from escapes or deliberate releases is unsubstantiated. We therefore now call on DEFRA, FERA, the RSPB, BTO and Natural England to scrap the Risk Assessment document and it's conclusions until first-hand accurate data is collected from pairs nesting or present in Britain.

We also call on the British Ornithologist's Union to remove the Eurasian Eagle Owl from Category E* of the British List and place this species in Category A unless they can validate their claim that **all** Eagle Owls currently in Britain originate from captive stock.

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Text by Tony Warburton,

Hon. President, World Owl Trust,

February 2010

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