

Illegal bird hunting in the Maltese Islands: an international perspective

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Abstract Illegal hunting is a widespread problem in the Maltese Islands. As well as having a significant impact on the islands' breeding birds, the illegal hunting of migratory birds has a wider, international dimension. To investigate the international impact of illegal hunting in Malta we considered the entire ring recovery database of the Valletta Bird Ringing Scheme, from the 1920s to the present. All records of birds that were ringed overseas and shot by hunters in Malta were analysed, comprising a total of 435 records of 84 species from 36 countries. The majority of these ring recoveries (91.7%) were from species listed as protected and non-huntable throughout the European Union, with a significant proportion listed as European Species of Conservation Concern. Birds of prey were particularly represented in the database, 78.6% of which were ringed as nestlings or juveniles, highlighting the impact of illegal hunting on this group of species in particular. Species targeted illegally by Maltese hunters originate from countries throughout Europe and Africa, particularly Finland, Sweden, Tunisia, Italy and Germany. For rare species or those with small breeding populations in affected countries, illegal hunting could therefore have a significant impact on the long-term persistence of European populations. Poaching of species such as the pallid harrier *Circus macrourus* and saker falcon *Falco cherrug* could have a global impact on their populations.

Keywords BirdLife Malta, bird ringing, illegal hunting, Malta, migration, raptors

Introduction

The Maltese Islands lie along the central route of the European–African migratory flyway and are an important stepping stone for birds migrating between European breeding grounds and African wintering grounds. The islands represent a vital stop-over and refuelling site for the birds to replenish fat stores for onwards migration (Sultana & Gauci, 1982; Raine, 2011), particularly during bad weather, and are also an important overnight roost site for larger migrating birds (e.g. birds of prey, herons

and storks). More than 170 species use Malta during the spring and autumn migration periods (Sultana & Gauci, 1982; Casha, 2004; Raine, 2011).

The Maltese Islands have developed a notorious reputation for uncontrolled illegal hunting activities, which are widespread throughout the main islands of Malta and Gozo, with hunters targeting the majority of bird taxa, from raptors, herons and storks to migrating passerines and hirundines. BirdLife Malta records thousands of incidents of illegal hunting and trapping annually (Raine & Temuge, 2009, 2010; Raine, 2011; BirdLife Malta, 2014), including hundreds of reports of hunters targeting protected species, and video evidence is passed on to local law enforcement agents as well as the European Commission. Illegal hunting in Malta has also received significant media attention, both locally and internationally. Recent examples of the scale of the problem include the massacre of a flock of white storks *Ciconia ciconia* in May 2011 (BirdLife International, 2011), the killing of at least 14 individuals of a mixed flock of booted eagles *Hieraaetus pennatus*, lesser spotted eagles *Clanga pomarina* and short-toed eagles *Circaetus gallicus* on a single day in October 2013 (Gozo News, 2013), the systematic killing of black storks *Ciconia nigra* (BirdLife Malta, 2013a; Times of Malta, 2013) and the targeting of white storks at the start of the 2014 autumn hunting season. The latter event resulted in the killing of at least one stork from an Italian reintroduction effort and led to the temporary and unprecedented closure of the autumn hunting season that year (Malta Today, 2014a); several ornithologists and journalists were injured in the ensuing violent protests by hunters (Times of Malta, 2014a,b).

Illegal hunting has also resulted in the extirpation of a number of Maltese bird species and has prevented their re-establishment in recent years (Raine et al., 2009; Raine, 2011; Sultana et al., 2011). These include the western jackdaw *Corvus monedula* (the last individual was shot in Gozo in 1956; Sultana & Gauci, 1982), the barn owl *Tyto alba*, (the last breeding pair was shot in 1988; Fenech & Balzan, 1988), and the peregrine falcon *Falco peregrinus* (the last confirmed breeding pair was shot in Ta' Cenc in 1982; Sultana & Gauci, 1983). Peregrine falcons in particular pass over the Maltese Islands each year on migration and sometimes attempt to nest, but the persecution of these species prevents them from reestablishing despite available breeding habitat and prey (Raine et al., 2009; Sultana et al., 2011). Peregrine falcons are particularly prized and are targeted using decoys, live pigeons as

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lures, and speedboats to access potential nesting areas on cliffs (Raine, 2011).

Reports of illegal hunting span the whole year and occur countrywide. A significant proportion of the country's 10,811 registered hunters (figures for the 2014 autumn hunting season; WBRU, 2015) are involved as well as an unknown number of unregistered hunters. These incidents are well documented by both BirdLife Malta and the Committee Against Bird Slaughter (a German conservation organization operating on the islands during peak migration periods), and video evidence is presented on their websites.

Since 1965 licensed bird ringers have been carrying out scientific studies and bird monitoring work on the Maltese Islands through the Valletta Bird Ringing Scheme (administered by BirdLife Malta). This work has helped to document Malta's significance as a migratory stepping stone in the Mediterranean, as the collection of data on international ring recoveries identifies the European or African origins of species passing over the Maltese Islands in spring and autumn. This analysis aims to investigate the international impact of illegal hunting in Malta by considering the database records that relate to birds shot and killed by Maltese hunters.

Methods

The entire ring recovery database of the Valletta Bird Ringing Scheme was considered initially, comprising 1,486 records from the 1920s until October 2014. Ring recoveries were categorized as (1) recaptured and released by licensed ringers, (2) resighted in the field, (3) brought in dead or wounded by members of the public, (4) killed by hunters, or (5) trapped by trappers and not released.

Only those killed by hunters (category 4) were considered in the analysis, along with records from category 3 where the cause of injury was confirmed by an independent veterinarian as gunshot. Records in category 4 included rings that were shown by the hunters themselves to members of BirdLife Malta, rings that were handed over to the Natural History Museum of Malta from hunters' taxidermy collections, those from illegal taxidermy collections confiscated by the police, and rings retrieved from birds that were shot by hunters and recovered by the police, BirdLife Malta or other NGOs.

Prior to 1911 there were no protected species in Malta and any bird could be shot legally. With Government Notice 25 in 1911 a number of species were protected but it was not until Legal Notice 68 was published in 1980 that all species apart from 21 legally huntable species and 15 trappable species were officially protected. Some of the species protected in Europe and shot in Malta prior to 1980 would therefore have been shot legally. Nonetheless, as all of these species are

still targeted in Malta despite being protected it is valid to consider all of the ring recoveries pertaining to birds being shot in the wider context of this analysis.

Results

A total of 435 records in the database relate to birds that were ringed overseas and shot in Malta during 1920–2014, representing 36 countries (Fig. 1) and 84 species (Table 1). Only 8.3% of these species may be hunted legally in Malta. Ring recoveries represented 31 European countries, four African countries and Russia. Four rings from the island of Crete were recovered, and five from Sicily. The five most commonly recorded countries were Finland (16.5%), Sweden (11.5%), Italy (9.4%), Tunisia (9.2%) and Germany (6.7%), which together account for 53.3% of all recoveries.

The five most common species ringed overseas and shot in Malta were osprey *Pandion haliaetus* ($n = 45$), common kestrel *Falco tinnunculus* ($n = 36$), European turtle dove *Streptopelia turtur* ($n = 29$), black-crowned night heron *Nycticorax nycticorax* ($n = 23$) and Caspian tern *Sterna caspia* ($n = 22$), which comprised 35.6% of all recoveries. Of these only the European turtle dove may be hunted legally in Malta.

Forty (47.6%) of the species recorded were listed as Species of European Conservation Concern by BirdLife International (BirdLife International, 2004). One was categorized as Endangered, one as Vulnerable and five as Near Threatened on the IUCN Red List (IUCN, 2014), and two were categorized as Vulnerable on the European Red Data List (IUCN, 2015).

The most common broad avian groupings (in terms of total number of ring recoveries) were raptors (22.1%), waders (19.5%), gulls & terns (9.4%) and herons (8.0%). As raptors were the most commonly targeted species we considered this group in more detail. Ring recoveries for raptors (of which there were 143 individuals of 18 species recorded in the database) were reported from 17 countries (Fig. 2). The majority of these birds (68.6%) were ringed as nestlings in their country of origin (predominantly Finland, Sweden and Germany), with a further 10.0% ringed as juveniles (Table 2).

The most northerly recoveries were from birds ringed in Sweden and Finland. The most southerly recoveries were of a curlew sandpiper *Calidris ferruginea* and a sanderling *Calidris alba*, both ringed on the Cape, South Africa.

Discussion

The analysis has shown that birds from a minimum of 36 countries are affected by hunting in Malta, with the majority of species targeted illegally.

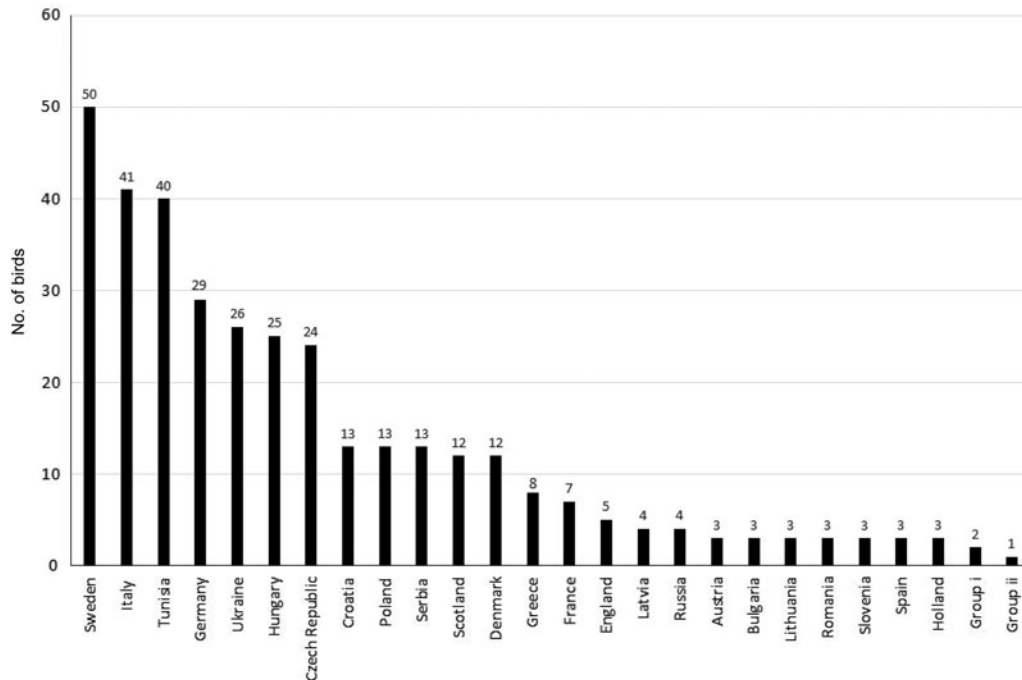


FIG. 1 Numbers of birds ringed overseas and shot in Malta, recorded in the database of the Valletta Bird Ringing Scheme from the 1920s until October 2014. Group 1 comprises Estonia, Norway, Slovakia, Switzerland and South Africa, with two ring recoveries from each, and Group 2 comprises Belgium, Bosnia and Herzegovina, Ireland, Wales, Namibia and Nigeria, with one ring recovery from each.

However, the ringing database underrepresents the number of ringed birds shot, and probably the number of countries of origin, for a number of reasons: a disparity in the level of ringing activity in various countries; the fact that only recoveries reported to BirdLife Malta are recorded, and not those kept by hunters in private illegal collections; the decreasing likelihood of hunters reporting ring recoveries of protected species because of increased scrutiny of the Maltese hunting community; the fact that areas where illegal hunting is prolific are dangerous for members of the public to enter; and hunters regularly hide the carcasses of protected birds they have shot, and leave them to rot or recover them later for taxidermy purposes. The latter is well documented; for example, in September 2009 the carcasses of 213 protected birds that had been shot were found hidden in the woodlands of Mizieb, an area used as a hunting ground by Malta’s largest hunting federation, the FKNK (the Federation for Hunting and Conservation; Raine, 2009). The Mizieb woodlands were searched again in 2010 and 2014 and dead protected birds were found hidden throughout the area (Times of Malta, 2014c).

The annexing of public land by hunters is a common occurrence. Hunting occurs at a high density, with c. 47 hunters or trappers per km² of huntable land, and even more concentrated activity in prime hunting areas (Raine et al., 2009), where hunters actively prevent public access, making it easier to shoot protected species without scrutiny and reducing the likelihood of ring recoveries being reported. This

phenomenon has become more accentuated in recent years, with hunting organizations taking members of the public to court in an effort to keep them out of hunting areas. In 2014 the FKNK pressed charges against a member of BirdLife Malta who had been part of a UK film documentary team investigating illegal hunting in the Mizieb and Ahrax woodlands, claiming that the documentary team had been trespassing on what is actually public land (Malta Today, 2014b).

Our analysis has shown that certain countries appear to be particularly affected by illegal hunting activities in Malta. Finland, Sweden and Germany were well represented in the analysis, indicating that illegal hunting in Malta could affect conservation actions being undertaken in these countries, particularly if their breeding populations of the targeted species are small. A significant proportion of recoveries of birds from these countries shot illegally in Malta are birds of prey. The central Mediterranean flyway is particularly important for raptors, with thousands making the crossing every year and passing directly over Malta (Beaman & Galea, 1974; Sultana & Gauci, 1982; Coleiro et al., 1995; Garcia & Arroyo, 1998; Agostini et al., 2003; Sammut & Bonavia, 2004; Panuccio et al., 2005; Raine, 2011). Many of these birds concentrate in the evening in key roosting areas in Malta, where they are particularly vulnerable to illegal hunting. They are shot as they come in to roost in the late afternoon, or at night under the cover of darkness, by a network of hunters using walkie-talkies to communicate and pinpoint roost sites of rare species. In spring, when flocks of

TABLE 1 All species listed in the BirdLife Malta database as ringed overseas and shot in the Maltese islands.

Species	No. of ring recoveries	Species	No. of ring recoveries
Osprey <i>Pandion haliaetus</i>	45	Ruff <i>Philomachus pugnax</i>	2
Common kestrel <i>Falco tinnunculus</i>	36	Little ringed plover <i>Charadrius dubius</i>	2
European turtle dove <i>Streptopelia turtur</i>	29	Ruddy turnstone <i>Arenaria interpres</i>	2
Black-crowned night heron <i>Nycticorax nycticorax</i>	23	Sanderling <i>Calidris alba</i>	2
Caspian tern <i>Sterna caspia</i>	22	Yellow wagtail <i>Motacilla flava</i>	2
Western marsh-harrier <i>Circus aeruginosus</i>	22	Grey heron <i>Ardea cinerea</i>	2
Common quail <i>Coturnix coturnix</i>	17	European greenfinch <i>Chloris chloris</i>	2
Black-headed gull <i>Larus ridibundus</i>	15	Montagu's harrier <i>Circus pygargus</i>	2
Mediterranean gull <i>Larus melanocephalus</i>	13	Eurasian nightjar <i>Caprimulgus europaeus</i>	2
European honey buzzard <i>Pernis apivorus</i>	12	Pied avocet <i>Recurvirostra avosetta</i>	1
Barn swallow <i>Hirundo rustica</i>	12	Black kite <i>Milvus migrans</i>	1
Great cormorant <i>Phalacrocorax carbo</i>	12	Black redstart <i>Phoenicurus ochruros</i>	1
Purple heron <i>Ardea purpurea</i>	11	Eurasian collared dove <i>Streptopelia decaocto</i>	1
Great skua <i>Stercorarius skua</i>	10	Common chiffchaff <i>Phylloscopus collybita</i>	1
Lesser black-backed gull <i>Larus fuscus</i>	8	Common shelduck <i>Tadorna tadorna</i>	1
Wood sandpiper <i>Tringa glareola</i>	8	Common snipe <i>Gallinago gallinago</i>	1
Common cuckoo <i>Cuculus canorus</i>	6	Garganey <i>Anas querquedula</i>	1
Common scops-owl <i>Otus scops</i>	6	European goldfinch <i>Carduelis carduelis</i>	1
Eurasian hobby <i>Falco subbuteo</i>	6	Great snipe <i>Gallinago media</i>	1
Dunlin <i>Calidris alpina</i>	5	Grey plover <i>Pluvialis squatarola</i>	1
Sand martin <i>Riparia riparia</i>	5	Greylag goose <i>Anser anser</i>	1
Sandwich tern <i>Sterna sandvicensis</i>	5	Gull-billed tern <i>Sterna nilotica</i>	1
Squacco heron <i>Ardeola ralloides</i>	5	Northern house-martin <i>Delichon urbicum</i>	1
Common starling <i>Sturnus vulgaris</i>	4	Kingfisher <i>Alcedo atthis</i>	1
Eurasian golden oriole <i>Oriolus oriolus</i>	4	Lesser kestrel <i>Falco naumanni</i>	1
Slender-billed gull <i>Larus genei</i>	4	Lesser spotted eagle <i>Aquila pomarina</i>	1
Eleonora's falcon <i>Falco eleonora</i>	3	Eurasian linnet <i>Carduelis cannabina</i>	1
Eurasian hoopoe <i>Upupa epops</i>	3	Pallid harrier <i>Circus macrourus</i>	1
Little egret <i>Egretta garzetta</i>	3	Peregrine falcon <i>Falco peregrinus</i>	1
Northern gannet <i>Morus bassanus</i>	3	European pied flycatcher <i>Ficedula hypoleuca</i>	1
Common ringed plover <i>Charadrius hiaticula</i>	3	Red kite <i>Milvus milvus</i>	1
European storm petrel <i>Hydrobates pelagicus melitensis</i>	3	Red-footed falcon <i>Falco vespertinus</i>	1
White wagtail <i>Motacilla alba</i>	3	European roller <i>Coracias garrulus</i>	1
Audouin's gull <i>Ichthyaeus audouinii</i>	2	Eurasian siskin <i>Carduelis spinus</i>	1
Collared flycatcher <i>Ficedula albicollis</i>	2	Saker falcon <i>Falco cherrug</i>	1
Common buzzard <i>Buteo buteo</i>	2	Sedge warbler <i>Acrocephalus schoenobaenus</i>	1
Common redshank <i>Tringa totanus</i>	2	Short-eared owl <i>Asio flammeus</i>	1
Common sandpiper <i>Actitis hypoleucos</i>	2	Spotted redshank <i>Tringa erythropus</i>	1
Common swift <i>Apus apus</i>	2	Temminck's stint <i>Calidris temminckii</i>	1
Scopoli's shearwater <i>Calonectris diomedea</i>	2	White stork <i>Ciconia ciconia</i>	1
Curlew sandpiper <i>Calidris ferruginea</i>	2	Woodchat shrike <i>Lanius senator</i>	1
Great reed warbler <i>Acrocephalus arundinaceus</i>	2	Yellow-legged gull <i>Larus michahellis</i>	1

raptors such as Montagu's harrier *Circus pygargus* and marsh harrier *Circus* spp. roost in agricultural fields in areas such as Rabat and Delimara, hunters sweep the fields at night with dogs and spotlights, killing every bird they find (Raine, 2011). Consequently, this group of birds is heavily persecuted in Malta, with large numbers killed every year (Sultana & Gauci, 1982; Coleiro et al., 1995; Sammut & Bonavia, 2004; Raine, 2011; BirdLife Malta, 2014).

The systematic targeting of birds of prey is evident in the database. Ring recoveries from shot raptors (often in large numbers) include marsh harrier, Montagu's harrier, pallid

harrier *Circus macrourus*, honey buzzard *Pernis apivorus*, osprey, red-footed falcon *Falco vespertinus*, common kestrel, lesser kestrel *Falco naumanni*, hobby *Falco subbuteo*, peregrine falcon, red kite *Milvus milvus* and lesser spotted eagle. The effects of illegal persecution on birds of prey are well documented (e.g. Cramp & Simmons, 1980; Hatsofe, 1981; Del Hoyo et al., 1994; Thirgood et al., 2000; Whitfield et al., 2004; Saurola, 2007). As these species are often rare or declining, have small numbers of young and take several years to reach sexual maturity, the impact of illegal hunting on their populations can have implications for their

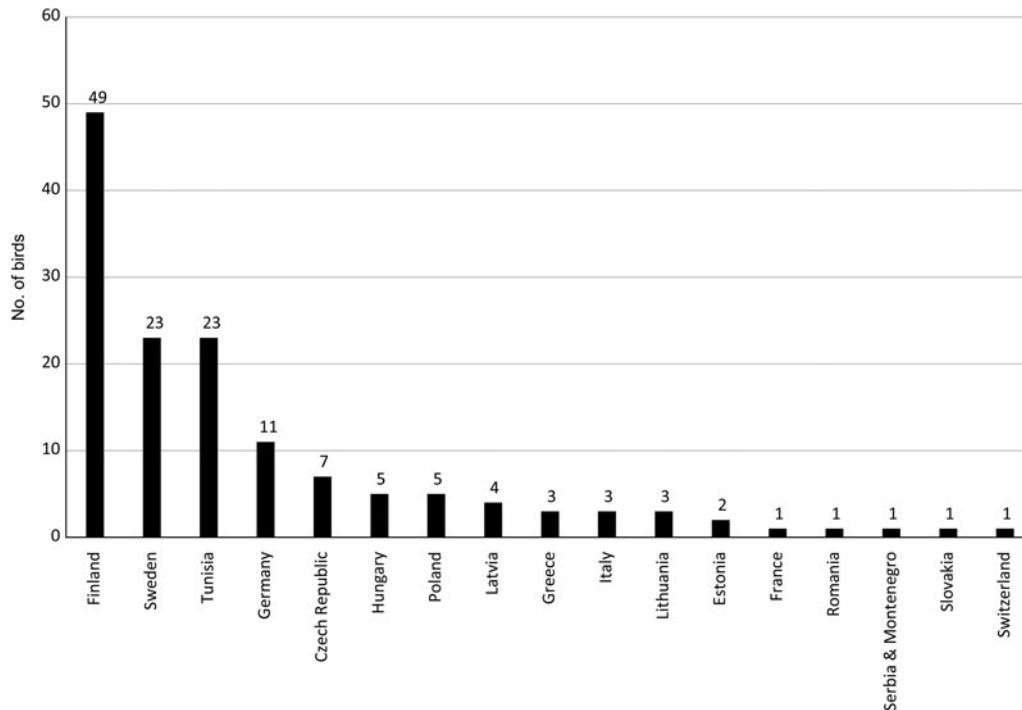


FIG. 2 Numbers of raptors ringed overseas and shot in Malta, recorded in the database of the Valletta Bird Ringing Scheme from the 1920s until October 2014.

conservation status. The peregrine falcon has been extirpated as a breeding bird in Malta despite this species migrating over the islands annually and there being suitable habitat and sufficient food resources available (Raine, 2011; Sultana et al., 2011).

The impact on international conservation efforts is exacerbated by the fact that the majority of larger birds shot in Malta (such as raptors and herons) are juveniles that were ringed as pulli in the nest in their country of origin. Some of these, such as the colour-banded white stork from a re-introduction project in Italy that was shot in 2014, are the output of intensive and expensive re-introduction and conservation efforts in their breeding countries; if the juveniles are subsequently shot down in Malta this effectively negates those conservation efforts. Furthermore, as it takes several years for the young of many of these species to reach sexual maturity, they have to survive several migrations before they are of a sufficient age to breed successfully. For birds that migrate over Malta, the chances of survival to breeding age are reduced by illegal hunting.

Many of these species are of conservation concern in Europe or even globally. Ring recoveries from birds ringed as nestlings or juveniles and killed in Malta include pallid harrier (Near Threatened globally; Endangered in Europe, with a breeding population of 5–51 pairs), osprey (unfavourable conservation status; rare), red-footed falcon (Near Threatened globally; Vulnerable in Europe), saker falcon (Endangered globally; European population 360–540 pairs), lesser spotted eagle (unfavourable conservation

status, declining) and purple heron *Ardea purpurea* (unfavourable conservation status, declining; BirdLife International, 2014).

For many of the species in this analysis ring recoveries were from only a few countries; for example, 97.7% of osprey recoveries were from Finland and Sweden, with 100.0% of these ringed as nestlings, and in most cases undertaking their first migration. Satellite tracking of both Swedish and Finnish ospreys confirms the importance of the central European–African migratory route for breeding birds (Hake et al., 2001; Kjellén et al., 2001; FMNH, 2006). Following global declines of this species in the late 1960s (mainly as a result of persecution and the widespread use of the pesticide DDT; Saurola, 1997), the osprey has been the focus of intensive conservation efforts throughout its breeding range and is listed as a species of unfavourable conservation status in Europe, with populations in Finland and Sweden numbering 4,550–5,300 (BirdLife International, 2014). With 45 records of osprey in the database (making it one of the most commonly represented species), and regular reports of unringed birds being shot down every year during migration, the systematic killing of osprey in Malta could have a significant impact on Finnish and Swedish populations of this species.

This is also true for other species, such as the great skua *Stercorarius skua*, Mediterranean gull *Larus melanocephalus* and sandwich tern *Sterna sandvicensis* (the latter designated as being of unfavourable conservation status and depleted in Europe; BirdLife International, 2014). For these

TABLE 2 Numbers of nestling, juvenile and adult raptors ringed overseas and shot in Malta, recorded in the database of the Valletta Bird Ringing Scheme. (These data were not available for all birds in the database.)

Species	Nestling	Juvenile	Adult
Black kite	1		
Common buzzard	1	1	
Common kestrel	16	7	13
Eleonora's falcon	3		
European hobby	3	2	
Honey-buzzard	10	1	2
Lesser kestrel		1	
Lesser spotted eagle	1		
Montagu's harrier	1		1
Osprey	45		
Pallid harrier			1
Peregrine falcon	1		
Red kite	1		
Red-footed falcon	1		
Saker falcon	1		
Western marsh-harrier	11	2	8
Scops-owl			5
Short-eared owl	1		
<i>Total</i>	96	14	30

species, ring recoveries have been from single countries only. All ring recoveries from great skua ($n = 10$) have been from juveniles that originated in Scotland. With 9,600 pairs, Scotland holds over half of the global population of this species (BirdLife International, 2014). The recovery of shot juveniles in Malta confirms the migratory patterns of this species, with many juveniles leaving Scotland after the breeding season and spending the winter roaming throughout the Mediterranean (Flegg, 2004). For both the Mediterranean gull ($n = 13$) and the sandwich tern ($n = 5$) all ring recoveries have been from the Ukraine. Illegal hunting of protected species that originate from single countries can have a significant effect on the breeding populations of these species.

For countries with small breeding populations of targeted species, illegal hunting in Malta could ultimately result in the extirpation of the species; for example, key populations of eagles in Europe, which number only a few pairs, could be decimated in the course of a single day's hunting. A satellite-tracked juvenile osprey from a Corsican reintroduction effort went missing after its satellite stopped transmitting after it left an overnight roost site in Delimara in the south of Malta (BirdLife Malta, 2013b). It was assumed to have been shot (although it was not included in the ring recovery analysis as no carcass was found). This was one of only six osprey chicks that fledged in Corsica in 2013.

Many of the raptor species targeted in Malta have small breeding populations in their range countries. A consideration of the various harrier species migrating over Malta

represents a good example of this issue as these birds are heavily targeted. Ring recoveries from western marsh harriers include birds from Estonia, Italy and Finland, all with breeding populations in the low hundreds (BirdLife International, 2015a). A ring was recovered from a pallid harrier from Romania, where the population is estimated to be 0–6 breeding pairs (BirdLife International, 2015b). Two of the three Montagu's harriers from which rings were recovered came from Germany, where there are estimated to be 470–550 breeding pairs (BirdLife International, 2015c). It is apparent that the targeting of these species in Malta could have a significant impact on the small breeding populations in key affected countries.

Malta's hunting laws have been weakened repeatedly, and the hunting lobby granted numerous concessions. This is principally because hunting in Malta is a highly politicized issue (Briguglio, 2014), with the two main political parties alternately courted and threatened by the hunting lobby. General elections are often won by a small margin, and therefore the parties often actively seek the votes of the hunting lobby; for example, in 2003 when Malta was considering joining the European Union the Prime Minister wrote a personal letter to all hunters on the island, assuring them that joining the EU would not affect their hunting and trapping practices (Malta Today, 2013). Hunters will support parties that appear to favour the hunting lobby, and the main hunting lobby, the FKKNK, often instructs its members to vote for particular candidates (Malta Today, 2014c).

In 2014, the year after the Labour Party was elected to government after years of a Nationalist government, new concessions were granted to hunters. These included extension of the hunting season; the removal of an afternoon curfew during the peak roosting period for raptors, despite the curfew demonstrably reducing the level of persecution of raptors; allowing hunting on Sundays during the controversial spring hunting season; and allowing finch trapping for the first time in 5 years, with 7,018 trapping sites in operation despite repeated warnings from the European Commission.

The politicization of the issue makes enforcement of hunting laws problematic as neither of the main political parties wants to be perceived as being too strict. At the beginning of the 2014 hunting season the law enforcement unit tasked with dealing with illegal hunting and trapping was weakened, with key long-term personnel reassigned to new units (Times of Malta, 2014d). This ongoing weakening of the hunting laws culminated in widespread illegal hunting activities (which included the shooting of a white stork ringed in Italy, and multiple birds of prey), and the government closed the hunting season on 20 September for a 20-day period. There were violent demonstrations by hunters in the capital city, Valletta, on 21 September and local ornithologists were attacked in Buskett Bird Sanctuary, leaving

two people injured; nine hunters were arrested (Times of Malta, 2014a,b).

Violence against bird watchers and conservationists in Malta is common. A BirdLife Park Ranger was shot and wounded on two separate occasions, in 2007 and 2009 (Malta Independent, 2007; Times of Malta, 2009a) and his farm was burnt down (Times of Malta, 2008a). Bird ringers' cars have been shot at and burned (Times of Malta, 2008b), international volunteers have been assaulted on multiple occasions (Malta Independent, 2010a,b; Malta Today, 2010) and BirdLife Malta Nature Reserves have been vandalized (Times of Malta, 2007a, 2009b). In the most serious incident of vandalism an estimated 3,000 trees in a native reforestation project were cut down overnight (Times of Malta, 2007b) and the same site was attacked 2 years later, with 104 trees cut down. Following the latter incident three hunters were arrested and found guilty (Times of Malta, 2010).

As an example of how locally divisive the issue of hunting is in Malta, a referendum on whether or not a spring hunting season should be allowed to continue was held on the island on 11 April 2015 (BirdLife Malta, 2015a). Spring hunting, which is banned under Article 7(4) of the EU Birds Directive 79/409/EEC, results in an annual spike in illegal hunting incidents as thousands of hunters take to the countryside, with little regulation or enforcement. If the outcome of the referendum had led to the permanent closure of the spring hunting season this would have been a positive step towards controlling illegal hunting during the spring migration period; the benefits were demonstrated when the spring hunting season was closed in 2008 and 2009, with dramatic decreases in illegal hunting incidents during the spring of these two years (Raine & Temuge, 2009; Raine, 2011). Unfortunately the referendum passed in favour of keeping the spring hunting season, by a narrow margin: 50.4% in favour, 49.6% against, with 250,648 votes cast. Reflecting the importance of the debate, the results were the focus of international media attention (e.g. BBC, 2015; EurActive, 2015; Reuters, 2015). Predictably, when the spring hunting season was subsequently opened in 2015 following the referendum, reports of illegal hunting increased, with protected birds shot including common cuckoo and common kestrel (BirdLife Malta, 2015b, 2015c, 2015d). After a kestrel was shot and landed in a football field at St Edward's College, in front of primary school children during their lunch break, the Prime Minister decided to close the spring hunting season early (Malta Today, 2015), highlighting the fact that illegal hunting cannot be controlled adequately during an open hunting season.

Regardless of the outcome of the referendum, spring hunting is still illegal within the European Union, and therefore it is for the European Commission to consider whether or not Malta's choice to have a spring hunting season as a derogation from the Birds Directive is justified. The recent

addition of the turtle dove (one of the two species targeted 'legally' during the spring hunting season) to the European Red List (categorized as Vulnerable because of its declining populations throughout Europe) will also need to be taken into consideration (BirdLife International, 2015d). With this new conservation status, a derogation to allow spring hunting in Malta appears even less legally defensible.

Given the international dimension of illegal hunting in Malta, and the conservation status of many of the targeted species, the Maltese government needs to recognize this as an international problem and deal with it accordingly. As a member of the European Union, Malta has a legal obligation to comply with the Birds Directive, the primary European legislation for the protection of wild birds. Migratory species must be protected by robust national legislation that implements the Birds Directive in its entirety. This is not only the responsibility of the Maltese government but also of the European Commission, which must ensure that the laws of the Birds Directive are enforced. Increased fines, custodial sentences for repeat offenders, shorter hunting seasons and effective enforcement are key to controlling the situation. With judges handing out increased fines and several jail sentences in recent years, it appears that this is having a positive effect on reducing illegal hunting activities in some areas. If illegal hunting is brought fully under control in Malta this could have positive ramifications for conservation at a European scale.

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