PROPOSAL FOR INCLUSION OF SPECIES ON THE APPENDICES OF THE CONVENTION ON THE CONSERVATION OF MIGRATORY SPECIES OF WILD ANIMALS

A. PROPOSAL: To list *Falco vespertinus* on Appendix I

B. PROPONENT: European Union and its Member States

C. SUPPORTING STATEMENT:

1. Taxon

1.1	**Classis**	**:**	Aves
1.2	**Ordo**	**:**	Falconiformes
1.3	**Familia**	**:**	Falconidae
1.4	**Species**	**:**	*Falco vespertinus*
1.5	**Common name(s)**	**:**	Red-footed Falcon, Faucon kobez, Cernícalo Patirrojo, Falco cuculo, Rotfußfalke, Kék vércse

2. Biological data

2.1 Distribution

The breeding range extends from Central and Eastern Europe through northern Central Asia to Lake Baikal. The southern limit of the breeding range passes through Serbia, Bulgaria, Ukraine, Southern Russia and northern Kazakhstan (Purger 2008; Cramp & Simmons 1977). Irregularly breeding birds can be found northward to Belarus (Dombrovski & Ivanovski 2005), western Russia north to Moscow, central Russia up to Novosibirsk, Krasnoyarsk and Khantia-Mansia region. The core of the EU population breeds in the Carpathian Basin (eastern Austria, Hungary, western Romania, and northern Serbia) which form the western border of the range. A small but stable number of Red-footed Falcons breed in northern Italy (Sponza, Licheri, & Grassi 2001; Tinarelli 1997). Occasionally, Red-footed Falcons may breed in small numbers in France (Pilard & Roy 1994; de Sousa 1994) and Finland. Vagrants were observed in most European countries (Nightingale & Allsopp 1994; Dudley et al. 2006). The species is highly gregarious both during the breeding season (see later) and on migration, night roosts of up to 21,000 individuals (Kostenko *et al.*, unpublished report) are known to be formed.

Red-footed Falcons are obligate trans-equatorial migrants, all individuals leave breeding grounds for Southern Africa.

2.2 Population

The Red-footed Falcon has a large global population estimated between 300,000-800,000 individuals (Ferguson-Lees *et al.* 2001), but recent evidence suggests that it is undergoing a large decline in certain parts of its range. The European population of 26,000-39,000 pairs

suffered a large decline during 1970-1990 (Tucker and Heath 1994), and has continued to decline during 1990-2000, particularly in the key populations in Russia and, with overall declines exceeding 30 per cent in ten years (BirdLife International 2004). Minimum European population is estimated to be at least 25000 pairs based on recent data, collected for the European Species Action Plan (Palatitz et al. 2009).

A national scale survey conducted in Ukraine in 2009, estimated an approx. decline of 23% compared to 1990-2000 (Kostenko, M. *unpubl. report*). In Hungary population estimates have shown a decline from 2,000-2,500 pairs in the late 1980s to 600-700 in 2003-2006 (Palatitz *et al.* 2007). In Bulgaria, the previously estimated 50-150 pairs dropped to 15-50 pairs based on a partial survey conducted in 2009 (Todorov, E. *pers. com*). Where long and mid-term datasets are available, the species show evident decline (30-60%) except the marginal population in Italy where stable but fluctuating (Gustin *et al. pers. comm.*)

Systematic surveys are lacking from the European Russia and from the central Asian part of the breeding range. Expert estimates suggests rather stable than heavily declining populations in central Asia (Bragin, E. *pers. com.*), however declines have been reported from eastern Siberia, where the species may have disappeared as a breeder from the Baikal region (Popov 2000).

Based on recent population estimates (BirdLife International 2004) the species was recently classified by IUCN as Near Threatened.

2.3 Habitat

Red-footed Falcons prefer open habitats fringed with small woods, groups of trees or shelter belts that provide nesting and roosting opportunities. They inhabit steppe, pseudo-steppe, wooded steppe and extensive agricultural habitats, where they prefer crop mosaics with presence of fallow land, grasslands or alfalfa. In the Pannonian Basin, stable colonies are formed close to grasslands avoiding areas with large forests in the vicinity (Fehérvári et al. 2009). In Africa, Red-footed Falcons can be found in grasslands, savannah and scrublands (Del Hoyo et al. 1992).

The Red-footed Falcon is a facultative colonial breeder (i.e. breeding in colonies and in solitary pairs). It does not build a nest; naturally falcon colonies breed in rook's (*Corvus frugilegus*) nests in their colonies (rookeries) (Horváth 1964; Purger & Tepavcevic 1999) or in loose colonies of magpie (*Pica pica*) nests (Végvári, Magnier, & Nogues 2001). Due to recent conservation actions aiming to compensate the lack of nesting sites in suitable habitats, the species started to breed in colonies of artificial nest boxes (Fehérvári et al. 2009).

Solitary pairs occupy a variety of nesting opportunities such as magpie nests, hooded crow nests (*Corvus corone cornix*), buzzard nests (*Buteo* sp.) as well as cavities in trees.

Pre-migration communal roost sites are regularly observed in extensively cultivated agricultural areas in the breeding ground (www.falcoproject.hu), and there is information on roost site formation during migration (e.g. Cyprus).

2.4 Migrations

Red-footed Falcons are obligate and broad-front trans-equatorial migrants that fly individually or in loose groups, at various altitudes (up to ~2500 metres a.s.l) (Leshem & Yom-Tov 1996; Forsman 1999; Shirihai et al. 2000). The migration route of the EU population is presumed to directly cross the Mediterranean, where at least some birds utilize mid-sea islands as stopover and roosting sites (Rossi & Bonacorsi 1998; Roth 2008; Shirihai et al. 2000). Pre-nuptial (spring) migration takes place between March and June, reaching Europe mainly in April/May up until the first half of June. Post-nuptial (autumn) migration takes place between August and late October.

The known non-breeding range is in Sub-Saharan Africa to South Africa; ranging from Angola and Namibia, through Botswana, Zimbabwe, Zambia to southern Kenya (Ferguson-Lees & Christie 2001). The breeding population of the Pannonian Basin is proved to overwinter mainly in Angola and Namibia (www.falcoproject.hu).

3. Threat data

Evidence of threat is mainly documented from the western part of the breeding range and from the mediterranean migration flyways. As transequatorial migrant with similar pathways and wintering ground the species is supposed to face several identique threats as lesser kestrel *Falco naumanni* which is already listed in Appendix I.

3.1 Direct threat

Persecution in the breeding range may be direct (illegal shooting and/or disturbance) or indirect (persecution of rooks). Although, Red-footed Falcons are not a hunted species, shooting is reported (e.g. in the Ukraine, where the species is not legally protected). The scale of shooting is not known, but it should not be underestimated and is qualified as 'High' by Ukranian ornithologists (Kostenko, M. *et al*., in Palatitz et al 2009). During the data collection for the European Species Action Plan (Palatitz et al. 2009) direct persecution was reported 'high' in Malta, Slovakia, Turkey, Ukraine and potential in Greece.

Persecution of rooks is known to take place widely either by direct shooting at rookeries, disturbance, and nest destruction during the breeding period. All these activities indirectly impact the Red-footed Falcons causing direct mortality, nest abandonment and failed breeding. (Palatitz et al. 2009).

Electrocution was reported widely, but little is known on the extent and the population level effect of these threats. During the data collection for the European Species Action Plan (Palatitz et al. 2009) the threat of electrocution was reported 'high' in Hungary and 'medium' in Slovakia.

The probability of collision with vehicles can be locally 'high' in Romania and Serbia (Palatitz et al. 2009).

The reference to direct threats in Asia and Africa are few, the only reported threats are fires in Kazakhstan (Palatitz et al. 2009).

3.2 Habitat destruction

Probably one of the most important limiting factors for the breeding population is the number of available colony nests in suitable habitats. As Red-footed Falcons primarily use rookeries for colonial breeding throughout their breeding range, the threats that affect rook colonies also apply to Red-footed Falcons. Even if rook populations in some range states are stable (BirdLife International 2009) certain populations of this species have moved to settlements. This shift in habitat selection of rooks may affect the Red-footed Falcon unfavourably (Fehérvári et al. 2009).

The loss and degradation of key habitats can be broadly linked to the intensification of agriculture in the past (Böhning-Gaese & Bauer 1996), in the case of the Red-footed Falcon specifically the conversion of grasslands to arable fields, thus homogenizing habitats into large monocultures. Being a highly gregarious species, even small scale habitat alterations may have a considerable effect on the population. Even if grasslands are not lost, the development of intensive agricultural techniques pushed back extensive farming resulting in the decrease in traditional livestock husbandry (especially extensive grazing) which is presumed to be one of the key elements in Red-footed Falcons' habitat choice.

The general reduction of habitat quality (especially the low prey abundance due to excessive pesticide use) was reported 'critical' in Bulgaria and Slovakia, 'potentially high' in Greece, Hungary, Romania, Serbia, Turkey and Ukraine (Palatitz et al. 2009).

The degradation of nesting sites by either tree-logging, fires or lack of tree plantations suitable for the species are widely reported in the breeding range (Palatitz et al. 2009).

3.3 Indirect threats

Red-footed Falcons are predominantly insectivorous species, and as such are possibly exposed to secondary poisoning of a wide selection of pesticides used in the agricultural sector. Poisoning may happen when the chemicals are accumulated through the food chain.

As Red-footed Falcons winter in sub-Saharan Africa – where chemical usage regulations are more permissive compared to Europe – they are presumably exposed to dangerous pesticides banned from the European breeding range. The single study of chemical analysis of Red-footed Falcon eggs available shows DDE (a metabolite of DDT) in all eight eggs studied. However, the study gives no data as to levels so it is not clear whether DDE concentration was significant or just a trace presence (Henny et al. 2003).

Negative effects of climate change on migrating birds are well documented (Walther et al., 2002; Root et al., 2003; Both et al., 2006; Parmesan, 2006). As long distance insectivorous migrants are among the most sensitive bird taxa, the Red-footed Falcon is thought to face important challenges in adaptation due to rapidly changing environmental conditions.

3.4 Threats connected especially with migrations

Illegal shooting of Red-footed Falcons also occurs in the Mediterranean on migration. For example, 52 Red-footed Falcons were shot at a roosting site at Phasouri, Cyprus in October

2007 (BirdLife, 2007). In Malta Red-footed Falcons are also potential targets of poachers (BirdLife Malta, *pers. com.*). An extreme case of mass shooting was revealed on the 29th of May 1987, when hundreds of Red-footed Falcons were shot down, with some hunters bragging bags of over 50 birds each (A. Raine pers. comm.). Recently proved migratory routes of the central EU population drives through Greece, where locally collected information suggest at least occasional threats caused by illegal hunting (Vasilis Vousas pers. comm.). Illegal hunting and lack of law enforcement was reported in all EU countries on the migratory way (Palatitz et al. 2009).

Little is known on the threats (e.g. large scale changes in food supply, habitat loss, effect of windfarms, pesticide use, persecution in wintering grounds etc.) influencing survival rate in migratory ways and wintering grounds. The widespread protection of the species at the international level – especially in countries of the African continent - could contribute to draw attention to the species resulting in better information flow and finally to coordinated actions to quantify, localize and prevent threats during migration.

3.5 National and international utilisation

Considering the small size of *Falco vespertinus* and that its main prey are large insects, small mammals and birds, it does not appear to be an extremely appealing species for falconry, apart from taking as a pet in a few cases.

4. Protection status and needs

4.1 National protection status

The Red-footed Falcon is a protected species in many range states, particularly in the western parts of its range. An exception is Ukraine, where the species is declining, but not protected by law (for detalis see 3.1).

4.2 International protection status

- **EU Birds Directive - Council Directive on the conservation of wild birds (2009/147/EC)** Category: Annex I.
- **Bern Convention - Convention on the Conservation of European Wildlife and Natural Habitats** Category: Appendix II.
- **Bonn Convention - Convention on the Conservation of Migratory Species of Wild Animals** Category: Appendix II.
- **CITES - Convention on International Trade in Endangered Species of Wild Fauna and Flora** Category: Appendix II.

4.3 Additional protection needs

The species should receive protection under national legislation in countries where this is not already the case (in Europe especially in Ukraine). Restriction of the legal hunting of rooks,

especially in the colonies during breeding (March-August) in all range states would be necessary. Further efforts are needed to strengthen legal protection and law enforcement.

According to the European Species Action Plan of the species (Palatitz et al. 2009) the following results have to be reached to move the Red-footed Falcon from the IUCN Red List Near Threatened to Least Concern category: 1.) improved foraging habitats are available throughout the European range. 2.) nest site availability ensured throughout the European range. 3.) the most important knowledge gaps filled by 2015. 4.) direct mortality reduced to levels not affecting the population trend (for details of the actions to be undertaken see Palatitz et al. 2009).

While the substantial decline of the species seems to have been curbed to a certain extent in most of the EU, it appears that this species is under threat in the remaining parts of their distribution range, where much of their breeding and wintering grounds are found and full legal protection is lacking. Therefore, in principle the conservation status of this migratory raptor would be improved through comprehensive and co-ordinated action covering their entire range.

5. Range States[1]

Afghanistan; ALBANIA; ALGERIA; ANGOLA; ARMENIA; AUSTRIA; Azerbaijan; Bahrain; BELARUS; BELGIUM; BENIN; Bosnia and Herzegovina; Botswana; BULGARIA; BURKINA FASO; Burundi; CAMEROON; Central African Republic; CHAD; China; CÔTE D'IVOIRE; CROATIA; CYPRUS; CZECH REPUBLIC; DEMOCRATIC REPUBLIC OF THE CONGO; DENMARK; DJIBOUTI; EGYPT; ESTONIA; ETHIOPIA; FINLAND; FRANCE; GABON; GAMBIA; GEORGIA; GERMANY; GHANA; GREECE; HUNGARY; IRAN, ISLAMIC REPUBLIC OF; Iraq; IRELAND; ISRAEL; ITALY; JORDAN; KAZAKHSTAN; KENYA; Kuwait; Kyrgyzstan, LATVIA; Lebanon; Lesotho; LUXEMBOURG; LIBERIA; LIBYAN ARAB JAMAHIRIYA; LIECHTENSTEIN; Malawi; MALI; MALTA; MAURITANIA; MOLDOVA; MONTENEGRO; MOROCCO; Namibia; NETHERLANDS; NIGER; NIGERIA; NORWAY; POLAND; PORTUGAL; ROMANIA; RWANDA; SAO TOMÉ AND PRINCIPE; SAUDI ARABIA; SENEGAL; SERBIA; SEYCHELLES; SLOVAKIA; SLOVENIA; SOMALIA; SOUTH AFRICA; SPAIN; Sudan; Swaziland; SWEDEN; SWITZERLAND; SYRIAN ARAB REPUBLIC; TAJIKISTAN; THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA; UNITED REPUBLIC OF TANZANIA; TOGO; TUNISIA; Turkey; Turkmenistan; UKRAINE; UNITED KINGDOM; United States of America; UZBEKISTAN; YEMEN, Zambia; Zimbabwe

6. Comments from Range States

7. Additional remarks

[1] CMS Parties in capitals. Countries, where the species were recorded in the past 20 years.

8. References:

BirdLife International (2004) *Birds in Europe: population estimates, trends and conservation status*. Cambridge. UK: BirdLife International. (BirdLife Conservation series No. 12).

BirdLife International. (2009) Species factsheet: *Corvus frugilegus*.

Both, C., Bouwhuis, S., Lessells, C.M., Visser, M.E., 2006. Climate change and population declines in a long-distance migratory bird. Nature 441, 81–83.

Böhning-Gaese & Bauer, H.G. (1996) Changes in species abundance, distribution, and diversity in a central European bid community. *Conservation Biology*, **10**, 175-187.

Cramp, S. & Simmons, K.E.L. (1977) *1994. Handbook of the Birds of Europe, the Middle East, and North Africa: the birds of the western Palearctic*. Oxford University Press, Oxford, UK.

Del Hoyo, J., Elliott, A., Sargatal, J. & International, B. (1992) *Handbook of the Birds of the World.* Lynx Edicions Barcelona.

Dombrovski, V.C. & Ivanovski, V.V. (2005) New data on numbers and distribution of birds of prey breeding in Belarus. *Acta Zoologica Lituanica*, **15**, 218.

Dudley, S.P., Gee, M., Kehoe, C. & Melling, T.M. (2006) The British list: a checklist of birds of Britain. *Ibis*, **148**, 526-563.

Fehérvári, P., Harnos, A., Neidert, D., Solt, Sz. and Palatitz, P. (2008): Modelling habitat selection of the Red-footed falcon (Falco vespertinus): a possible explanation of recent changes in breeding range within Hungary. Applied Ecology and Environmental Research 7(1): 59-69.

Ferguson-Lees, J. & Christie, D.A. (2001) *Raptors of the World*. Houghton Mifflin Company.

Forsman, D. (1999) *The raptors of Europe and the Middle East: a handbook of field identification*. T. & AD Poyser.

Henny, C.J., Galushin, V.M., Khokhlov, A.N., Malovichko, L.V. & Iljukh, M.P. (2003) Organochlorine pesticides in eggs of birds of prey from the Stavropol region, Russia. *Bulletin of environmental contamination and toxicology*, **71**, 163-169.

Horváth, L. (1964) A kék vércse (Falco vespertinus L.) é s a kis õrgébics (Lanius minor Gm.) élettörténetének összehasonlító vizsgálata II. A fiókák kikelésétõl az õszi vonulásig. *Vertebrata Hungarica*, VI**.**

Leshem, Y. & Yom-Tov, Y. (1996) The magnitude and timing of migration by soaring raptors, pelicans and storks over Israel. *Ibis*, 138, 188-203.

Nightingale, B. & Allsopp, K. (1994) Invasion of red-footed falcons in spring 1992. *British Birds*, **87**, 223-231.

Palatitz, P., Solt, S. és Fehérvári, P., (2007): Kékvércse-védelmi Munkacsoport beszámolója-2005 . HELIACA, MME Ragadozómadár-védelmi Szakosztály Évkönyve, 12-17.

Palatitz, P., Fehérvári, P. Solt, S. and Barov, B. (2009) European Species Action Plan for the red-footed falcon *Falco vespertinus*. 49 p. http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/docs/falco_vespertinus.pdf.

Parmesan, C., 2006. Ecological and evolutionary responses to recent climate change. Annual Review of Ecology, Evolution, and Systematics 37, 637.

Pilard, P. & Roy, Y. (1994) Nidification du faucon kobez Falco vespertinus dans les Bouches-du-Rhone. [The nesting of the red-footed falcon Falco vespertinus in the Bouches-du-Rhone.]. *Ornithos.*, **1**, 47-48.

Popov, V.V. (2000) The Red-footed Falcon Falco vespertinus near the Baikal. Bulletin of the Irkutsk State University.

Purger, J.J. (2008) Numbers and distribution of red-footed falcons (Falco vespertinus) breeding in Voivodina (northern Serbia): a comparison between 1990-1991 and 2000-2001. *BELGIAN JOURNAL OF ZOOLOGY*, **138**, 3.

Purger, J.J. & Tepavcevic, A. (1999) Pattern analysis of red-footed falcon (Falco vespertinus) nests in the rook (Corvus frugilegus) colony near Torda (Voivodina, Yugoslavia), using fuzzy correspondences and entropy. *Ecological Modelling*, **117**, 91-97.

Root, T.L., Price, J., Hall, K., Schneider, S., Rosenzweig, C., Pounds, A., 2003. Fingerprints of global warming on wild animals and plants. Nature 421, 57–60.

Rossi, T. & Bonacorsi, G. (1998) Les migrations du faucon kobez Falco vespertinus en Corse. *Alauda(Dijon)*, **66**, 279-282.

Roth, T. (2008) Outward (autumn) bird migration at the Southeastern Peninsula and Cape Greco, Cyprus: the phenologies of regular migrants. *SANDGROUSE*, **30**, 77.

Shirihai, H., Kirwan, G.M., Yosef, R. & Centre--Eilat, I.B. (2000) *Raptor migration in Israel and the Middle East: a summary of 30 years of field research*. International Birding & Research Center in Eilat.

de Sousa, D. (1994) Nidification du faucon kobez Falco vespertinus dans l'Isere. [Nesting of the red-footed falcon Falco vespertinus in Isere.].*Ornithos.*,**1**,46-47.

Sponza, S., Licheri, D. & Grassi, L. (2001) Reproductive behaviour and success of red-footed falcon Falco vespertinus in North Italy. *Avocetta*, 69.

Tinarelli, R. (1997) La nidificazione del falco cuculo Falco vespertinus nell'Emilia-Romagna orientale. [The nesting of the red-footed falcon Falco vespertinus in eastern Emilia-Romagna.]. *Picus*, **23**, 111-112.

Végvári, Z., Magnier, M. & Nogues, J. (2001) Kék vércsék (Falco vespertinus) fészekválasztása és állományváltozása a vetési varjak (Corvus frugilegus) állományváltozásának tükrében 1995-1999 között a Hortobágyon. *Aquila*, **107/108**, 9-14.

Walther, G.R., Post, E., Convey, P., Menzel, A., Parmesan, C., Beebee, T.J., Fromentin, J.M., Hoegh-Guldberg, O., Bairlein, F., 2002. Ecological responses to recent climate change. Nature 416, 389–395.