



SKADAR LAKE REGION AND «TARGET SPECIES» SPECIES OF EUROPEAN CONSERVATION CONCERN

Plenary lecture

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The Skadar Lake Region represents one of the most important centers of geodiversity and biodiversity for Western Balkan and SE Europe. Skadar Lake Region is a unique example of well-preserved freshwater ecosystems with specific geomorphologic, hydrological, geological, soil and climatic features. It is also characterized by high biodiversity including numerous endemic and relict species of flora and fauna.

The part of this Region has the status of the National Park since 1983. International recognition of the importance of Skadar Lake ecosystems come in 1995, when the Region was designated as Ramsar site. This region is also on the list of Important Bird Areas of Europe (IBA). The Union of European herpetologists (SHE) has included this area as the *Adriatic triangle* to be one of the research priorities for further investigation. During Joint International Workshop on «MAB Biosphere Reserves and Transboundary Cooperation in SEE Region» (held in Podgorica and Skadar in October, 2005, under the auspices of the UNESCO/ROSTE – IUCN) Skadar Lake NP was nominated for the MAB Reserve and transboundary Park between Montenegro and Albania. From November 2005 Albania also has pronounced its part of the Lake for a National Park.

British conservationist N. Myers and World Conservation Union (2000) identified 25 «biodiversity hotspots», as a way of prioritizing areas that are most important globally for biodiversity conservation. A hotspot is an area that supports an especially great diversity of species, particularly species that are endemic to the area, that is, found nowhere else in the world. The Skadar Lake Region is a constitutive part of one of them – Mediterranean Basin.

Regions of Europe with high species richness and with high concentrations of threatened species may form an important fundament for the establishment of the Pan European Ecological Network. For the identification of «Important Species Areas» in

Europe, information on the distribution of endangered species of «European conservation concern» may play a key role. While the conservation of ecosystems is essential to preserve environmental, ecological and evolutionary processes, species can be regarded as the natural unit to form the basis for conservation policy and management (Mace 2004). The species level is therefore suitable as the fundamental unit for the development of a Pan European Ecological Network (PEEN). The concept of ecological networks is becoming increasingly important in both policies and practices of nature conservation throughout Europe.

Pan European Ecological Network, a tool of the Pan European Biological and Landscape Diversity Strategy (PEBLDS), can be seen as one of the priority issues for nature conservation in Europe (Council of Europe, UNEP & ECNC 1996). The Pan European Biological and Landscape Diversity Strategy is an initiative of the Council focuses on the conservation of landscapes, habitats, and species of European importance, including their genetic diversity. The strategy addresses all biological and landscape initiatives under one European approach. It reinforces the implementation of existing measures and identifies additional actions that need to be taken over the next two decades. PEBLDS also provides a framework to promote a consistent approach and common objectives for national and regional actions to implement the Convention on Biological Diversity (UNEP, 1992).

For the establishment of such networks, it is essential to have adequate information on the threat status and distribution of plant and animal species throughout Europe. As there are thousands of plant and animal species, it is necessary to make a selection of species that are considered to be of specific conservation concern, so-called «target species». **Target species – Species of European concern** represent a database driven selection of plant and animal species for the implementation of the Pan European Ecological Network (Ozinga, Schaminee, 2005).

Within the *Target Species - Species of European concern* a database has been developed which includes complete species lists for Europe for the following groups of organisms: vascular plants, vertebrates (freshwater fishes, amphibians, reptiles, birds and mammals) and butterflies. For each species information is given on degree of endemism for Europe, legal status and threat status. Thousands of plant species and animal species occur in Europe only. These endemic species can be considered as Europe's specific contribution to global biodiversity. Following the IUCN Red Data Books, hundreds of these European species are threatened. These species merit special nature conservation efforts in Europe. However, only several hundreds of species (not covering all species that are threatened according to IUCN-criteria) are protected under European regulations.

For political and practical reasons, it is impossible to give all endemic and all threatened species legal protection. The target species concept provides a practical tool to overcome part of these problems, although actual all threatened species deserve appropriate nature conservation measures.

Target species are defined as species of European importance, which fulfill at least one of the following criteria:

• **Legal protection:** Listing of species in international conventions (species for which European legislation imposes to its contracting parties specific measures):

○ The Bonn Convention on Migratory Species aims to conserve terrestrial, marine and avian migratory fauna throughout their range (Natura 2000).

○ The Bern Convention, aiming to ensure the conservation of wild plants and animals and their habitats, is an initiative of the Council of Europe (Emerald Network).

○ The Birds Directive for the conservation of wild birds (Natura 2000).

○ The Habitats Directive as instrument in the field of nature conservation that establishes a common framework for the conservation of wild animal and plant species and natural habitats (Natura 2000).

• **Threat:** Listing on IUCN Red lists (species whose survival in the near future is threatened on a global level, based on a combination of two criteria: rarity and trend);

• **Geographical distribution (endemism):** European endemics (species for which the global distribution is restricted to Europe or that are highly characteristic for Europe).

The area of Europe covered with Target Species Concept (Pan European territory) in principle reflects the present administrative borders of Europe, including European Turkey and Cyprus. For some taxonomic groups of species also Asiatic Turkey, Macaronesia (Azores, Canary Islands, Madeira Islands, but excluding Cape Verdian Islands) is taken into account. The east-border of Europe in Russia is situated from the south of Novaya Zemlya, along the Ural Mountains to the Caspian Sea. This east-border follows the delimitation of Europe according to Flora Europaea (Tutin *et al.* 1964-1980).

Within comprehensive study «Evolving GIS Technology in Assessment and Protection of Natural Potential of Skadar Lake Region» (Radović, D., 2008) a comparative analysis between species list in *Target species – Species of European concern* (Ozinga, Schaminee, 2005) and Checklist of species in *Biodiversity-database of the Shkodra/Skadar Lake* was accomplished.

The analysis included the following groups of organisms: vascular plants, vertebrates (freshwater fishes, amphibians, reptiles, birds and mammals) (Pulević *et al.* 2001), as well as checklist of amphibians & reptiles (Crnobrnja, D`uki}, 1997; D`uki}, Kalezi}, 2004), and butterflies (Jakšić, 2007) (Tab. 1; Appendixes 1-7).

Table 1. Overview of the species richness and the number of target species in Europe and Skadar Lake Region per taxonomic group

Taxonomic group /Region	Number of species (Pan Europa)	Number of Target species (Pan Europa)	Number of species (Skadar Lake Region)	Number of Target species (Skadar Lake Region)	% Pan Europa / Skadar Lake Region
Vascular plants	12.698	2.968	726 (National Park Skadar Lake)	24 (National Park Skadar Lake)	0,8 (National Park Skadar Lake)
Butterflies	576	74	107	13	17,6

Freshwater fishes	305	117	56	17	14,5
Amphibians	88	44	18	7	15,9
Reptiles	217	53	40	9	16,9
Birds	514	219	271	126	57,5
Mammals	295	147	59	28	19

The analysis results shows that Skadar lake region is marked with high number of target species within all seven taxons, especially the birds. There are 126 out of 219 (57,5%) birds species of European conservation concern (European birds target species).

The results of this study completely support statements of expert for natural values of Skadar lake region Prof. dr Radomir Lakušić dated in 1983. : Skadar lake region represents one of the most diverse, mysterious and interesting areas of the Balkan Peninsula and Europe.

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Appendix 1 : Vascular plants

Scientific name	Legal protection			Endemic		Globally threatened		Number of countries
	Ber n	HD 2	HD 4	for Europe	1 country in EU	IUCN 1997	IUCN 2000	
<i>Marsilea quadrifolia</i>	x	x						18
<i>Cardamine maritima</i>				x	x			1
<i>Lythrum flexuosum</i>	x	x		x	x	V		1
<i>Trapa natans</i>	x			x				21
<i>Myosotis scorpioides</i>	x							27
<i>Micromeria parviflora</i>				x		R		2
<i>Crepis bertiscea</i>				x?	x	R		1
<i>Carex acuta</i>		x						37
<i>Leucosium aestivum</i>				x?		I		24
<i>Najas flexilis</i>	x	x						12
<i>Cupressus sempervirens</i>							LR/nt	17
<i>Gladiolus palustris</i>		x	x	x		I		13
<i>Ramonda serbica</i>	x		x	x		R		4
<i>Dianthus knappii</i>				x	x	R		1
<i>Teucrium arduini</i>				x		R		2
<i>Scilla litardierei</i>		x	x	x	x	V		1
<i>Asperula scutellaris</i>				x		V		3
<i>Asperula baldaccii</i>				x	x	R		1
<i>Chaerophyllum coloratum</i>				x		R		2
<i>Centaurea glaberrima</i>				x	x	R		1
<i>Berteroa gintlilii</i>				x	x	E		1
<i>Viburnum maculatum</i>				x			DD	2
<i>Hyacinthella dalmatica</i>					x	R		1
<i>Rhamnus intermedius</i>				x		R		2

Appendix 2 : Butterflies

No	Naučno ime i narodno ime za vrstu	Convent. On the conserv. Of europ. Wildlife and natural habitats, Bern, 1979 (Annex II)	Habitats Directive 92/43/EEC		Pan-European Ecological Network	1996 IUCN Red List of Thret. Animals	Target Species (Alterra, 2005)	European Red Data List, 1991	Red Data Book of European Butterflies, 1999	Referenja o zaštiti insekata (Sl. List SR Crne Gore, 36/82)	Reds Data Book of Serbian Butterflies	Target species in SERBIA
			Annex II	Annex IV								
	LEPIDOPTERA PAPILIONIDAE											
1	<i>Zerynthia polyxena</i> (Denis & Schiffermüller, 1775) Uskr{nji leptir	x		x	x	V		*		B	V	+
2	<i>Parnassius mnemosyne</i> (Linnaeus, 1758) Mnemozine	x		x	x			*		B	nt	+
3	<i>Papilio alexanor</i> Esper, 1800 Aleksanor	x		x		Ex		*			E	
	PIERIDAE											
4	<i>Gonepteryx rhamni</i> (Linnaeus, 1758) Limunovac					V						
	LYCAENIDAE											
5	<i>Lycaena ottomanus</i> (Lefebvre, 1830) Otomanski dukat					E		*	V			
6	<i>Pseudophilotes vicrama</i> (Moore, 1865) Du{icin plavac						+	*	V		E	+
7	<i>Pseudophilotes bavius</i> (Eversmann, 1832) Zagasiti plavac					E	+	*	E		E	+
8	<i>Scolitantides orion</i> (Pallas, 1771) `ednjakov plavac				x	R	+	*	V			+

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9	<i>Glaucopteryx alexis</i> (Poda, 1761) Zelenotrbni plavac					R	+	*	V			+
	NYMPHALIDAE											
10	<i>Nymphalis xanthomelas</i> (Esper, 1781) `utonogi mnogobojac					E	+	*	V		E	+
11	<i>Euphydryas aurinia</i> (Rottemburg, 1775) Mo~varni {arenac	x	x		x	V	+	*	V		V	+
12	<i>Apatura metis</i> (Freyer, 1829) Paninski prelivac	x				V		E			V	+
13	<i>Chazara briseis</i> (Linnaeus, 1764) Samotnjak				x	V		*				

Appendix 3 : Freshwater fishes

Scientific name	Legal protection			Globally threatened (IUCN category)	Remarks distribution	Common name
	Hab. Dir.	Bern	Bonn			
<i>Acipenser naccarii</i>	*II, IV	II	II	VU	Adriatic sea, pr,sp	Adriatic sturgeon
<i>Acipenser stellatus</i>	V	III	II	EN	Adriatic, Black, Caspian sea	Starry sturgeon
<i>Acipenser sturio</i>	*II, IV	III	II	CR	All coast Europe	Common sturgeon
<i>Alosa fallax (fallax)</i>	II, V	III		DD	Atlantic to Baltic	Twaited shad
<i>Barbus meridionalis</i>	II, V	III			N pr, to E alps, Danube catchment area	Mediterranean barbel
<i>Barbus peloponnesius</i>	V	III		DD	S Europe	-
<i>Chondrostoma scodrensis</i>				CR	Scutari, Albania (Montenegro). Possibly extinct	-
<i>Cobitis taenia</i>	II	III			Broadly	Spined loach
<i>Lampetra fluviatilis</i>	II, V	III		EN	NE to SW-Europe	Lampern
<i>Lampetra planeri</i>	II	III			NE to SW (France) Europe	Brook lamprey
<i>Leuciscus souffia</i>	II	III			Rhone basin	Soufie
<i>Pachychilon pictum</i>		III		LR		-
<i>Padogobius panizzae</i>	II	III				
<i>Petromyzon marinus</i>	II	III		EN	broadly	Sea lamprey
<i>Rhodeus sericeus</i>	?	III				Amur bitterling

<i>Salmothymus obtusirostris</i>				EN	Croatia and Montenegro to eastern Albania (mostly in Adriatic Sea drainages).	Adriatic trout
<i>Thymallus thymallus</i>	V	III			C NE Europe	Grayling

Appendix 4 : Amphibians

Scientific name	Legal protection	Endemic in Europe	Globally threatened (IUCN category)	Distribution
<i>Bombina variegata</i>	1	1		Central Europe
<i>Proteus anguinus</i>	1	1	VU	East coast Adriatic Sea
<i>Rana dalmatina</i>	1	1		Central NS Europe
<i>Rana graeca</i>	1	1		Greece, Balkan
<i>Rana shqipërica</i>		1	EN	Montenegro, Albania
<i>Salamandra atra</i>	1	1		Alpine area
<i>Triturus carnifex</i>	1	1		Austria, Yugoslavia, Italy

Appendix 5 : Reptiles

Scientific name	Legal protection	Endemic in Europe	Globally threatened (IUCN category)	Distribution in Europe
<i>Algyroides nigropunctatus</i>	x	x		Balkan area
<i>Caretta caretta</i>	x		EN	Warm oceans, Mediterranean
<i>Chelonia mydas</i>	x		EN	only Turkey, Cyprus
<i>Dermodochelys coriacea</i>	x		EN	circumglobal
<i>Zamenis situlus</i>	x		DD	South-eastern Europe
<i>Lacerta vivipara pannonica</i>			VU	Northern-central Europe*
<i>Macrovipera schweizeri</i>	x	x	CR	Western Cyclades islands
<i>Testudo hermanni</i>	x	x	LR; nt	Mediterranean area
<i>Vipera ursinii</i>	x		EN	South and East Europe

Appendix 6 : Birds

Scientific name	SPEC status 2004	Legal protection				Globally threatened (IUCN)	Endemic in Europe	Common name
		Bern	Bonn	Birds Dir.	Notes			
<i>Accipiter brevipes</i>	2	II	II	I			1	Levant Sparrowhawk

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<i>Acrocephalus paludicola</i>	1	II	I	I	.		VU	1	Aquatic Warbler
<i>Actitis hypoleucos</i>	3				.	.	.		Common Sandpiper
<i>Aegypius monachus</i>	1	II		I	.		NT	1	Cinereous Vulture
<i>Alauda arvensis</i>	3				.	II	.		Eurasian Skylark
<i>Alcedo atthis</i>	3	II		I	.		.		Common Kingfisher
<i>Alectoris graeca</i>	2			I*	II**	* A. g. saxatilis + A. g. whitakeri only; ** all others	.	1	Rock Partridge
<i>Anas acuta</i>	3		II	.	II		.		Northern Pintail
<i>Anas clypeata</i>	3		II	.	II		.		Northern Shoveler
<i>Anas querquedula</i>	3		II	.	II		.		Garganey
<i>Anas strepera</i>	3		II	.	II		.		Gadwall
<i>Anser erythropus</i>	1	II	I	I	.	* Reintroduced	VU	1	Lesser White-fronted Goose
<i>Anthus campestris</i>	3	II		I	.		.		Tawny Pipit
<i>Aquila chrysaetos</i>	3	II		I	.		.		Golden Eagle
<i>Aquila clanga</i>	1	II	I	I	.		VU		Greater Spotted Eagle
<i>Aquila heliaca</i>	1	II	I	I	.		VU		Imperial Eagle
<i>Aquila pomarina</i>	2	II		I	.		.	1	Lesser Spotted Eagle
<i>Ardea purpurea</i>	3	II	II	I	.		.		Purple Heron
<i>Ardeola ralloides</i>	3	II		I	.		.		Squacco Heron
<i>Asio flammeus</i>	3	II		I	.		.		Short-eared Owl
<i>Athene noctua</i>	3	II		.	.		.		Little Owl
<i>Aythya ferina</i>	2			.	II		.	1	Common Pochard
<i>Aythya fuligula</i>	3			.	II		.		Tufted Duck
<i>Aythya marila</i>	3W			.	II		.		Greater Scaup
<i>Aythya nyroca</i>	1		I	I	.		NT		Ferruginous Duck
<i>Botaurus stellaris</i>	3	II	II	I	.		.		Great Bittern
<i>Bubo bubo</i>	3	II		I	.		.		Eurasian Eagle-owl
<i>Burhinus oediconemus</i>	3	II	II	I	.		.		Eurasian Thick-knee
<i>Buteo rufinus</i>	3	II		I	.		.		Long-legged Buzzard
<i>Calandrella brachydactyla</i>	3	II		I	.		.		Greater Short-toed Lark
<i>Calidris alpina</i>	3	II		I*	.	* C. a. schinzii only	.		Dunlin
<i>Caprimulgus europaeus</i>	2	II		I	.		.	1	Eurasian Nightjar
<i>Carduelis cannabina</i>	2	II		.	.		.	1	Eurasian Linnet
<i>Charadrius alexandrinus</i>	3	II	II	I	.		.		Kentish Plover
<i>Chlidonias hybrida</i>	3	II		I	.		.		Whiskered Tern
<i>Chlidonias niger</i>	3	II	II	I	.		.		Black Tern
<i>Ciconia ciconia</i>	2	II	II	I	.		.	1	White Stork
<i>Ciconia nigra</i>	2	II	II	I	.		.	1	Black Stork
<i>Circaetus gallicus</i>	3	II		I	.		.		Short-toed Snake-eagle
<i>Circus cyaneus</i>	3	II		I	.		.		Northern Harrier

<i>Circus macrourus</i>	1	II		I			NT		Pallid Harrier
<i>Coracias garrulus</i>	2	II	II	I	.		.	1	European Roller
<i>Coturnix coturnix</i>	3		II	.	II	Bonn: coturnix only	.		Common Quail
<i>Crex crex</i>	1	II	II	I	.		NT		Corncrake
<i>Delichon urbica</i>	3	II		.	.		.		Northern House Martin
<i>Elanus caeruleus</i>	3	II		I	.		.		Black-winged Kite
<i>Emberiza cia</i>	3	II		.	.		.		Rock Bunting
<i>Emberiza hortulana</i>	2			I	.		.	1	Ortolan Bunting
<i>Emberiza melanocephala</i>	2	II		.	.		.	1	Black-headed Bunting
<i>Falco biarmicus</i>	3	II	II	I	.		.		Lanner Falcon
<i>Falco cherrug</i>	1	II	II	I	.		EN	1	Saker Falcon
<i>Falco eleonorae</i>	2	II	II	I	.		.	1	Eleonora's Falcon
<i>Falco tinnunculus</i>	3	II	II	.	.		.		Common Kestrel
<i>Falco vespertinus</i>	3	II	II	I	.		.		Red-footed Falcon
<i>Galerida cristata</i>	3			.	.		.		Crested Lark
<i>Gallinago gallinago</i>	3			.	II		.		Common Snipe
<i>Gallinago media</i>	1	II		I	.		NT		Great Snipe
<i>Gavia arctica</i>	3	II	II, II	I	.		.		Arctic Loon
<i>Gavia stellata</i>	3	II	II	I	.		.		Red-throated Loon
<i>Glareola pratincola</i>	3	II	II	I	.		.		Collared Pratincole
<i>Grus grus</i>	2	II	II	I	.		.	1	Common Crane
<i>Gypaetus barbatus</i>	3	II		I	.		.		Lammergeier
<i>Haliaeetus albicilla</i>	1	II	I	I	.		NT		White-tailed Eagle
<i>Hieraaetus fasciatus</i>	3	II		I	.		.		Bonelli's Eagle
<i>Hieraaetus pennatus</i>	3	II		I	.		.		Booted Eagle
<i>Hippolais pallida</i>	3	II		.	.		.		Olivaceous Warbler
<i>Hirundo rustica</i>	3	II		.	.		.		Barn Swallow
<i>Ixobrychus minutus</i>	3	II	II	I	.		.		Little Bittern
<i>Jynx torquilla</i>	3	II		.	.		.		Eurasian Wryneck
<i>Lanius collurio</i>	3	II		I	.		.		Red-backed Shrike
<i>Lanius excubitor</i>	3	II		.	.		.		Great Grey Shrike
<i>Lanius minor</i>	2	II		I	.		.	1	Lesser Grey Shrike
<i>Lanius senator</i>	2	II		.	.		.	1	Woodchat Shrike
<i>Larus minutus</i>	3	II		I	.		.		Little Gull
<i>Limosa limosa</i>	2			.	II		.	1	Black-tailed Godwit
<i>Lullula arborea</i>	2			I	.		.	1	Wood Lark
<i>Lymnocyptes minimus</i>	3			.	II		.		Jack Snipe
<i>Melanitta fusca</i>	3			.	II		.		White-winged Scoter
<i>Melanocorypha calandra</i>	3	II		I	.		.		Calandra Lark
<i>Merops apiaster</i>	3	II	II	.	.		.		European Bee-eater
<i>Miliaria calandra</i>	2			.	.		.	1	Corn Bunting

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<i>Milvus migrans</i>	3	II		I	.		.		Black Kite
<i>Milvus milvus</i>	2	II		I	.		.	1	Red Kite
<i>Monticola saxatilis</i>	3	II		.	.		.		Rufous-tailed Rock-thrush
<i>Monticola solitarius</i>	3	II		.	.		.		Blue Rock-thrush
<i>Muscicapa striata</i>	3	II	II	.	.		.		Spotted Flycatcher
<i>Neophron percnopterus</i>	3	II		I	.		.		Egyptian Vulture
<i>Numenius arquata</i>	2			.	II		.	1	Eurasian Curlew
<i>Numenius tenuirostris</i>	1	II	I	I	.		CR		Slender-billed Curlew
<i>Nycticorax nycticorax</i>	3	II		I	.		.		Black-crowned Night-heron
<i>Oenanthe hispanica</i>	2	II		.	.		.	1	Black-eared Wheatear
<i>Oenanthe oenanthe</i>	3	II		.	.		.		Northern Wheatear
<i>Otis tarda</i>	1	II	I*, II	I	.	* M. Eur. Pop	VU	1	Great Bustard
<i>Otus scops</i>	2	II		.	.		.	1	Common Scops-owl
<i>Oxyura leucocephala</i>	1	II	I	I	.		EN	1	White-headed Duck
<i>Pandion haliaetus</i>	3	II	II	I	.		.		Osprey
<i>Parus cristatus</i>	2	II		.	.		.	1	Crested Tit
<i>Parus palustris</i>	3	II		.	.		.		Marsh Tit
<i>Passer domesticus</i>	3			.	.		.		House Sparrow
<i>Passer montanus</i>	3			.	.		.		Eurasian Tree Sparrow
<i>Pelecanus crispus</i>	1	II	I, II	I	.		VU	1	Dalmatian Pelican
<i>Pelecanus onocrotalus</i>	3	II	I, II	I	.		.		Great White Pelican
<i>Perdix perdix</i>	3			I*	II**	* P. p. italica + P. p. hispaniensis only; ** all others	.		Grey Partridge
<i>Phalacrocorax pygmeus</i>	1	II	II	I	.		NT	1	Pygmy Cormorant
<i>Philomachus pugnax</i>	2			I	II		.	1	Ruff
<i>Phoenicurus phoenicurus</i>	2	II		.	.		.	1	Common Redstart
<i>Phylloscopus bonelli</i>	2			.	.		.	1	Bonelli's Warbler
<i>Phylloscopus sibilatrix</i>	2			.	.		.	1	Wood Warbler
<i>Picoides tridactylus</i>	3	II		I	.		.		Three-toed Woodpecker
<i>Picus canus</i>	3	II		I	.		.		Grey-faced Woodpecker
<i>Picus viridis</i>	2	II		.	.		.	1	Eurasian Green Woodpecker
<i>Platalea leucorodia</i>	2	II	II	I	.		.	1	Eurasian Spoonbill
<i>Plegadis falcinellus</i>	3	II	II	I	.		.		Glossy Ibis
<i>Podiceps auritus</i>	3	II	II	I	.		.		Horned Grebe
<i>Porzana pusilla</i>	3	II	II	I	.		.		Baillon's Crane
<i>Riparia riparia</i>	3	II		.	.		.		Sand Martin
<i>Scolopax</i>	3		II	.	II		.		Eurasian Woodcock

<i>rusticola</i>									
<i>Sterna albifrons</i>	3	II	II	I	.	.			Little Tern
<i>Sterna caspia</i>	3		II	I	.	.			Caspian Tern
<i>Sterna sandvicensis</i>	2	II	II	I	.	.	1		Sandwich Tern
<i>Streptopelia turtur</i>	3		II	.	II	.			European Turtle-dove
<i>Sturnus vulgaris</i>	3			.	II	.			Common Starling
<i>Sylvia hortensis</i>	3	II		.	.	.			Orphean Warbler
<i>Tetrax tetrax</i>	1	II		I	.	NT	1		Little Bustard
<i>Tringa erythropus</i>	3			.	II	.			Spotted Redshank
<i>Tringa glareola</i>	3	II		I	.	.			Wood Sandpiper
<i>Tringa totanus</i>	2			.	II	.	1		Common Redshank
<i>Tyto alba</i>	3	II		.	.	.			Barn Owl
<i>Upupa epops</i>	3	II		.	.	.			Eurasian Hoopoe
<i>Vanellus vanellus</i>	2			.	II	.	1		Northern Lapwing

Appendix 7 : Mammals

Scientific name	Legal protection				Endemic in Europe	Globally threatened (IUCN category)	Remarks distrib	Common English name
	Hab. Dir.	Bern	Bonn	CITES				
<i>Canis lupus</i>	II*/IV	II	-	II	.	LR/U*	Scattered	Wolf
<i>Crocidura suaveolens</i>	-	II	-	-	.	-	Scattered	Lesser white-toothed shrew
<i>Dryomys nitedula</i>	IV	-	-	-	.	LR/nt	Balkan	Forest dormouse
<i>Eliomys quercinus</i>	-	-	-	-	x	VU	Broadly	Garden dormouse
<i>Eptesicus serotinus</i>	IV	II	-	-	.	-	Broadly	Serotine
<i>Felis silvestris</i>	IV	II	-	II,A	.	-	Scattered	Wildcat
<i>Lutra lutra</i>	II/IV	II	-	I	.	-	Scattered	Otter
<i>Microtus felteni</i>	-	-	-	-	x	LR/nt	Balkans	Balkan pine vole
<i>Microtus thomasi</i>	-	-	-	-	x	LR/nt	SW Balkans	Thomas's vole
<i>Miniopterus schreibersii</i>	II/IV	II	-	-	.	-	S Europe	Schreibers' bat
<i>Muscardinus avellanarius</i>	IV	-	-	-	.	LR/nt	Broadly	Common dormouse
<i>Myotis blythii</i>	III/IV	II	-	-	.	-	S Europe	Lesser mouse-eared bat
<i>Myotis capaccinii</i>	II/IV	II	-	-	.	VU	Mediterranean	Long-fingered bat
<i>Myotis emarginatus</i>	II/IV	II	-	-	.	VU	S central Europe	Geoffroy's bat
<i>Myotis myotis</i>	II/IV	II	-	-	.	LR/nt	Broadly	Greater mouse-eared bat
<i>Myotis mystacinus</i>	IV	II	-	-	.	-	Broadly	Whiskered bat
<i>Nyctalus leisleri</i>	IV	II	-	-	.	LR/nt	Broadly	Leisler's bat

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<i>Nyctalus noctula</i>	IV	II	-	-	.	-	N central Europe	Noctule
<i>Pipistrellus kuhlii</i>	IV	II	-	-	.	-	S+ W Europe	Kuhl's pipistrelle
<i>Pipistrellus nathusii</i>	IV	II	-	-	.	-	Broadly	Nathusius' pipistrelle
<i>Pipistrellus pipistrellus</i>	IV	-	-	-	.	-	Broadly	Common pipistrelle
<i>Pipistrellus savii</i>	IV	II	-	-	.	-	S Europe	Savi's pipistrelle
<i>Plecotus auritus</i>	IV	II	-	-	.	-	Broadly	Brown long-eared bat
<i>Rhinolophus blasii</i>	II/IV	II	-	-	.	LR/nt	SW Romania, Balkans	Blasius' horseshoe bat
<i>Rhinolophus euryale</i>	II/IV	II	-	-	.	VU	Mediterranean	Mediterranean horseshoe bat
<i>Rhinolophus ferrumequinum</i>	II/IV	II	-	-	.	LR/cd	S central Europe	Greater horseshoe bat
<i>Rhinolophus hipposideros</i>	III/IV	II	-	-	.	VU	W central S Europe	Lesser horseshoe bat
<i>Vespertilio murinus</i>	IV	II	-	-	.	-	central E Europe	Parti-coloured bat