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Check-list of the molluscs (Mollusca) of the Czech Republic

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Abstract. The Check-list of 237 species of molluscs known so far from the Czech Republic is presented and the proportions of their ecological and zoogeographical groups are given. The status of threat is given for every species (Red List).

Distribution, Check-list, Red List, Mollusca, Czech Republic

INTRODUCTION

The research on molluscs has an almost 150 year old tradition in the Czech Lands. A first attempt to give an overview of molluscs in Bohemia was made by Schöbl (1860). This work was soon overridden by the detailed work of Slavík (1868). This initiated a more intensive interest in molluscs in Bohemia, which resulted in the renowned monograph of Uličný (1892–1895). Data covering the following 50 years were summarized by Ložek (1948). One year later, Ložek (1949) covered the entire territory of (then) Czechoslovakia. The latest monograph dealing with all recent molluscs of Czechoslovakia was published by Ložek (1956) as well. A more recent comprehensive work on molluscs covered only fresh-water species within the Czech Republic (Beran 1998).

The last complete list of the Czech Republic's molluscs was written 37 years ago (Ložek 1964) and was included in his work on Quaternary molluscs of Czechoslovakia. Naturally, our knowledge on the mollusc fauna of the Czech Republic has expanded since then. An up-to-date species list is badly needed. Many species not recorded formerly from the Czech Republic have been found within the last four decades. These are particularly species with an restricted range; either occuring in a few scattered and isolated sites or recorded in few localities close to the country's borders. A second group of species that has been getting more important over the last decade is non-native species spreading due to human activities. Another reason for new species to be listed is the advance made in taxonomy on various levels. Taking into account the practical usage of this invertebrate taxon of high indicator value in conservation we have complemented the inventory by an up-dated Red List.

Class:	Gastropoda			
Subclass:	Prosobranchia			
Superorder:	Archaeogastropoda			
Order:	Neritimorpha			
Superfamily:	Neritoidea			
Family:	Neritidae			
	Theodoxus Montfort, 1810			
	danubialis (C. Pfeiffer, 1828)		M	CR
	fluviatilis (Linnaeus, 1758)	B		EX
Superorder:	Caenogastropoda			
Order:	Architaenioglossa			
Superfamily:	Ampullarioidea			
Family:	Viviparidae			
	Viviparus Montfort, 1810			
	acerosus (Bourguignat, 1862)		M	EN
	contectus (Millet, 1813)	B	M	NT
	= *V. viviparus* (Linnaeus, 1758)			
	viviparus (Linnaeus, 1758)	B		VU
	= *V. fasciatus* (O. F. Müller, 1774)			
Order:	Neotaenioglossa			
Superfamily:	Rissooidea			
Family:	Hydrobiidae			
Subfamily:	Potamopyrginae			
	Potamopyrgus Stimpson, 1865			
	antipodarum (Gray, 1843) [2) 39)]	B	M	NE
	= *P. jenkinsi* (E. A. Smith, 1889)			
Subfamily:	Horatiinae			
	Alzoniella Giusti et Bodon, 1984			
	slovenica (Ložek et Brtek, 1964) [34)]		M	EN
	= *Belgrandiella slovenica komenskyi* Hudec, 1972 [13)]			
Subfamily:	Amnicolinae			
	Bythinella Moquin-Tandon, 1856			
	austriaca (von Frauenfeld, 1857) agg.	B(VU)	M(NT)	VU
Subfamily:	Lithoglyphinae			
	Lithoglyphus Hartmann, 1821			
	naticoides (C. Pfeiffer, 1828)		M	EN
Family:	Bithyniidae			
	Bithynia Leach, 1818			
	leachii (Sheppard, 1823) [38)]		M	CR
	tentaculata (Linnaeus, 1758)	B	M	LC
Superfamily:	Aciculoidea			
Family:	Aciculidae			
	Acicula Hartmann, 1821			
	parcelineata (Clessin, 1911)		M	CR
	Platyla Moquin-Tandon, 1856			
	polita (Hartmann, 1840)	B	M	VU
Superorder:	Heterostropha			
Order:	Ectobranchia			
Superfamily:	Valvatoidea			

Family:	Valvatidae			
	Valvata O. F. Müller, 1774			
	cristata O. F. Müller, 1774	B(LC)	M(NT)	LC
	macrostoma Mörch, 1864 [1) 22)]	B		CR
	= *V. pulchella* auct. nec Studer, 1820			
	piscinalis (O. F. Müller, 1774)	B	M	NT
Subclass:	Pulmonata			
Superorder:	Basommatophora			
Order:	Hygrophila			
Superfamily:	Acroloxoidea			
Family:	Acroloxidae			
	Acroloxus Beck, 1838			
	lacustris (Linnaeus, 1758)	B	M	LC
Superfamily:	Lymnaeoidea			
Family:	Lymnaeidae			
	Galba Schrank, 1803			
	truncatula (O. F. Müller, 1774)	B	M	LC
	Stagnicola Jeffreys, 1830			
	corvus (Gmelin, 1791)	B	M	LC
	= *Lymnaea palustris* (O. F. Müller, 1774) part. [3)]			
	fuscus (C. Pfeiffer, 1821) [12)]	B		NE
	occulta (Jackiewicz, 1959) [1) 32)]	B		CR
	turricula (Held, 1836)	B	M	LC
	= *Lymnaea palustris* (O. F. Müller, 1774) part. [3)]			
	Radix Montfort, 1810			
	ampla (Hartmann, 1821) [4)]	B(NT)	M(EN)	VU
	auricularia (Linnaeus, 1758)	B	M	LC
	ovata (Draparnaud, 1805) [4)]	B	M	LC
	peregra (O. F. Müller, 1774)	B	M	LC
	Myxas J. Sowerby, 1882			
	glutinosa (O. F. Müller, 1774)	B		EX
	Lymnaea Lamarck, 1799			
	stagnalis (Linnaeus, 1758)	B	M	LC
Superfamily:	Physoidea			
Family:	Physidae			
	Aplexa Fleming, 1820			
	hypnorum (Linnaeus, 1758)	B(NT)	M(VU)	VU
	Physa Draparnaud, 1801			
	fontinalis (Linnaeus, 1758)	B	M	NT
	Physella Haldemann, 1843			
	acuta (Draparnaud, 1805) [2)]	B	M	LC
Superfamily:	Planorboidea			
Family:	Planorbidae			
	Planorbis O. F. Müller, 1774			
	carinatus O. F. Müller, 1774	B	M	EN
	planorbis (Linnaeus, 1758)	B	M	LC
	Anisus Studer, 1820			
	leucostoma (Millet, 1813)	B	M	NT
	septemgyratus (Rossmässler, 1835) [14)]		M	CR
	spirorbis (Linnaeus, 1758)	B	M	VU
	vortex (Linnaeus, 1758)	B	M	LC
	vorticulus (Troschel, 1834)	B	M	CR
	Bathyomphalus Charpentier, 1837			
	contortus (Linnaeus, 1758)	B	M	LC

	Gyraulus Charpentier, 1837			
	acronicus (A. Férussac, 1807)	B(EN)	M(CR)	EN
	albus (O. F. Müller, 1774)	B	M	LC
	crista (Linnaeus, 1758)	B	M	LC
	laevis (Alder, 1838)	B(NT)	M(VU)	VU
	parvus (Say, 1817) [2) 15)]	B	M	NE
	rossmaessleri (Auerswald, 1852) [47)]		M	CR
	Hippeutis Charpentier, 1837			
	complanatus (Linnaeus, 1758)	B	M	LC
	Segmentina Fleming, 1818			
	nitida (O. F. Müller, 1774)	B	M	VU
	Planorbarius Froriep, 1806			
	corneus (Linnaeus, 1758)	B	M	LC
	Menetus H. & A. Adams, 1855			
	dilatatus (Gould, 1841) [2) 9)]	B		NE
	Ancylus O. F. Müller, 1774			
	fluviatilis O. F. Müller, 1774	B	M	LC
	Ferrissia Walker, 1903			
	clessiniana (Jickeli, 1882) [2) 21) 42)]	B	M	NE
	= *F. wautieri* (Mirolli, 1960)			
Superorder:	Eupulmonata			
Order:	Actophila			
Superfamily:	Ellobioidea			
Family:	Carychiidae			
	Carychium O. F. Müller, 1774			
	minimum O. F. Müller, 1774	B	M	LC
	tridentatum (Risso, 1826)	B	M	LC
Order:	Stylommatophora			
Suborder:	Orthurethra			
Superfamily:	Cochlicopoidea			
Family:	Cochlicopidae			
	Cochlicopa A. Férussac, 1821			
	lubrica (O. F. Müller, 1774)	B	M	LC
	lubricella (Rossmässler, 1835)	B	M	LC
	nitens (M. von Gallenstein, 1848) [40)]	B	M	CR
	repentina Hudec, 1960 [26)]	B	M	NE
Superfamily:	Pupilloidea			
Family:	Orculidae			
	Orcula Held, 1838			
	dolium (Draparnaud, 1801)		M	VU
	Sphyradium Charpentier, 1837			
	doliolum (Bruguière, 1792)	B	M	NT
Family:	Chondrinidae			
	Granaria Held, 1838			
	frumentum (Drapanaud, 1801)	B	M	NT
	Chondrina Reichenbach, 1828			
	avenacea (Bruguière, 1792)	B		EN
	clienta (Westerlund, 1883)		M	VU
Family:	Pupillidae			
	Pupilla Fleming, 1828			
	alpicola (Charpentier, 1837) [5) 44)]	B	M	CR
	muscorum (Linnaeus, 1758)	B	M	NT
	sterrii (Voith, 1840)	B	M	VU
	triplicata (Studer, 1820)	B	M	VU
	= *P. bigranata* auct. nec (Rossmässler, 1839)			

Family:	Pyramidulidae			
	Pyramidula Fitzinger, 1833			
	pusilla (Vallot, 1801) [24]	B(EN)	M(VU)	VU
	= *P. rupestris* (Draparnaud, 1801) part.			
Family:	Valloniidae			
Subfamily:	Valloniinae			
	Vallonia Risso, 1826			
	costata (O. F. Müller, 1774)	B	M	LC
	enniensis (Gredler, 1856)	B	M	EN
	excentrica Sterki, 1893	B	M	NE
	pulchella (O. F. Müller, 1774)	B	M	LC
Subfamily:	Acanthinulinae			
	Acanthinula Beck, 1847			
	aculeata (O. F. Müller, 1774)	B	M	NT
Family:	Vertiginidae			
Subfamily:	Truncatellininae			
	Columella Westerlund, 1878			
	aspera Waldén, 1966 [37]	B		LC
	edentula (Draparnaud, 1805)	B	M	LC
	Truncatellina Lowe, 1852			
	claustralis (Gredler, 1856)	B(EN)	M(VU)	EN
	costulata (Nilsson, 1823)		M	CR
	cylindrica (A. Férussac, 1807)	B	M	LC
Subfamily:	Vertigininae			
	Vertigo O. F. Müller, 1774			
	alpestris Alder, 1838	B	M	VU
	angustior Jeffreys, 1830	B	M	VU
	antivertigo (Draparnaud, 1801)	B	M	VU
	geyeri Lindholm, 1925 [45]	B		CR
	moulinsiana (Dupuy, 1849) [23]	B	M	CR
	pusilla O. F. Müller, 1774	B	M	NT
	pygmaea (Draparnaud, 1801)	B	M	NT
	ronnebyensis (Westerlund, 1871) [50]	B		CR
	substriata (Jeffreys, 1833)	B	M	NT
Superfamily:	Buliminoidea			
Family:	Buliminidae			
	Chondrula Beck, 1837			
	tridens (O. F. Müller, 1774)	B	M	VU
	Ena Turton, 1831			
	montana (Draparnaud, 1801)	B	M	NT
	Merdigera Held, 1838			
	obscura (O. F. Müller, 1774)	B	M	LC
	Zebrina Held, 1838			
	detrita (O. F. Müller, 1774)	B(EN)	M(CR)	EN
Suborder:	Sigmurethra			
Superfamily:	Clausilioidea			
Family:	Clausiliidae			
Subfamily:	Alopiinae			
	Cochlodina A. Férussac, 1821			
	cerata opaviensis Brabenec et Mácha, 1960 [16] [19]		M	EN
	commutata (Rossmässler, 1836)	B(VU)	M(EN)	VU
	= *C. costata* (C. Pfeiffer, 1828)			
	dubiosa corcontica Brabenec, 1967 [17]	B		EN
	laminata (Montagu, 1803)	B	M	LC
	orthostoma (Menke, 1828)	B(VU)	M(NT)	VU

	Itala O. Boettger, 1877			
	ornata (Rossmässler, 1836)	B(VU)	M(EN)	VU
Subfamily:	Clausiliinae			
	Ruthenica Lindholm, 1924			
	filograna (Rossmässler, 1836)	B	M	VU
	Pseudofusulus H. Nordsieck, 1977			
	varians (C. Pfeiffer, 1828)	B(CR)	M(EX?)	CR
	Macrogastra Hartmann, 1841			
	badia (C. Pfeiffer, 1828)	B(EN)	M(CR)	EN
	= *Iphigena mucida badia* (Rossmässler, 1836)			
	latestriata (A. Schmidt, 1857)		M	CR
	= *M. borealis* (O. Boettger, 1878) [49]			
	plicatula (Draparnaud, 1801)	B	M	NT
	tumida (Rossmässler, 1836)	B(EN)	M(VU)	VU
	ventricosa (Draparnaud, 1801)	B	M	NT
	Clausilia Draparnaud, 1805			
	bidentata (Ström, 1765)	B		EN
	cruciata (Studer, 1820)	B	M	VU
	dubia Draparnaud, 1805	B	M	LC
	parvula Férussac, 1807	B	M	NT
	= *C. rugosa parvula* Férussac, 1807 [48]			
	pumila C. Pfeiffer, 1828	B	M	LC
Subfamily:	Baleinae			
	Laciniaria Hartmann, 1844			
	plicata (Draparnaud, 1801)	B	M	NT
	Alinda H. & A. Adams, 1855			
	biplicata (Montagu, 1803)	B	M	LC
	Balea Gray, 1824			
	perversa (Linnaeus, 1758)	B	M	VU
	Vestia P. Hesse, 1916			
	gulo (E. A. Bielz, 1859)		M	CR
	ranojevici moravica (Brabenec, 1952)		M	EN
	turgida (Rossmässler, 1836)	B(EN)	M(VU)	VU
	Bulgarica O. Boettger, 1877			
	cana (Held, 1836)	B	M	EN
	nitidosa (Uličný, 1893)	B		VU
Superfamily:	Succineoidea			
Family:	Succineidae			
	Succinella Mabille, 1871			
	oblonga (Draparnaud, 1801)	B	M	LC
	Succinea Draparnaud, 1801			
	putris (Linnaeus, 1758)	B	M	LC
	Oxyloma Westerlund, 1885			
	elegans (Risso, 1826)	B	M	NT
	= *Succinea pfeifferi* Rossmässler, 1835			
	= *S. dunkeri* L. Pfeiffer, 1865			
Superfamily:	Achatinoidea			
Family:	Ferussaciidae			
	Cecilioides A. Férussac, 1814			
	acicula (O. F. Müller, 1774)	B	M	LC
Superfamily:	Punctoidea			
Family:	Punctidae			
Subfamily:	Punctinae			
	Punctum Morse, 1864			
	pygmaeum (Draparnaud, 1801)	B	M	LC

Subfamily:	Helicodiscinae			
	Hebetodiscus H. B. Baker, 1929			
	inermis (Baker, 1929) [2) 36)]	B		NE
	= *Helicodiscus singleyanus* (Pilsbry, 1890)			
Family:	Discidae			
	Discus Fitzinger, 1833			
	perspectivus (M. von Mühlfeld, 1816)	B	M	VU
	rotundatus (O. F. Müller, 1774)	B	M	LC
	ruderatus (A. Férussac, 1821)	B	M	NT
Superfamily:	Vitrinoidea			
Family:	Gastrodontidae			
	Zonitoides Lehmann, 1862			
	nitidus (O. F. Müller, 1774)	B	M	LC
Family:	Euconulidae			
	Euconulus Reinhardt, 1833			
	alderi (Gray, 1840)	B	M	VU
	fulvus (O. F. Müller, 1774)	B	M	LC
Family:	Vitrinidae			
	Vitrina Draparnaud, 1801			
	pellucida (O. F. Müller, 1774)	B	M	LC
	Eucobresia H. B. Baker, 1929			
	diaphana (Draparnaud, 1805)	B(LC)	M(NT)	LC
	nivalis (Dumont et Mortillet, 1854)	B(EN)	M(VU)	EN
	Semilimax Agassiz, 1845			
	kotulae (Westerlund, 1883)	B	M	VU
	semilimax (J. Férussac, 1802)	B	M	LC
Family:	Zonitidae			
Subfamily:	Vitreinae			
	Vitrea Fitzinger, 1833			
	contracta (Westerlund, 1871)	B	M	LC
	crystallina (O. F. Müller, 1774)	B	M	LC
	diaphana (Studer, 1820)	B	M	NT
	subrimata (Reinhardt, 1871)	B	M	VU
	transsylvanica (Clessin, 1877)	B(CR)	M(EN)	EN
Subfamily:	Zonitinae			
	Aegopis Fitzinger, 1833			
	verticillus (Lamarck, 1822)	B	M	VU
	Aegopinella Lindholm, 1927			
	epipedostoma (Fagot, 1879) [28)]		M	NT
	minor (Stabile, 1864)	B	M	LC
	nitens (Michaud, 1831)	B	M	LC
	nitidula (Draparnaud, 1805)	B(NT)	M(VU)	NT
	pura (Alder, 1830)	B	M	LC
	Perpolita H. B. Baker, 1928			
	hammonis (Ström, 1765)	B	M	LC
	= *P. radiatula* (Alder, 1830)			
	petronella (L. Pfeiffer, 1853)	B(EN)	M(CR)	EN
Subfamily:	Oxychilinae			
	Oxychilus Fitzinger, 1833			
	alliarius (Miller, 1822) [46)]	B		NE
	cellarius (O. F. Müller, 1774)	B	M	LC
	depressus (Sterki, 1880)	B	M	NT
	draparnaudi (Beck, 1837)	B	M	LC
	glaber (Rossmässler, 1835)	B	M	NT
	inopinatus (Uličný, 1887)	B(NT)	M(LC)	NT

	mortilleti (L. Pfeiffer, 1859) [27]	B		CR
	= *O. villae* (Strobel, 1853)			
Family:	Daudebardiidae			
	Daudebardia Hartmann, 1821			
	brevipes (Draparnaud, 1805)	B(EN)	M(VU)	EN
	rufa (Draparnaud, 1805)	B	M	NT
Family:	Milacidae			
	Tandonia Lessona et Pollonera, 1882			
	budapestensis (Hazay, 1881)	B	M	LC
	= *Milax gracilis* (Leydig, 1876)			
	rustica (Millet, 1843)	B		NT
Superfamily:	Limacoidea			
Family:	Limacidae			
	Bielzia Clessin, 1887			
	coerulans (M. Bielz, 1851)		M	VU
	Limax Linnaeus, 1758			
	cinereoniger Wolf, 1803	B	M	LC
	maximus Linnaeus, 1758	B	M	LC
	Limacus Lehmann, 1864			
	flavus (Linnaeus, 1758) [6]	B	M	LC
	Malacolimax Malm, 1868			
	tenellus (O. F. Müller, 1774)	B	M	LC
	Lehmannia Heynemann, 1863			
	macroflagellata Grossu et Lupu, 1962 [31]	B	M	NT
	marginata (O. F. Müller, 1774)	B	M	LC
	nyctelia (Bourguignat, 1861) [25]		M	EN
Family:	Agriolimacidae			
	Deroceras Rafinesque, 1820			
	agreste (Linnaeus, 1758)	B	M	LC
	laeve (O. F. Müller, 1774)	B	M	LC
	praecox Wiktor, 1966 [29]	B	M	NT
	reticulatum (O. F. Müller, 1774)	B	M	LC
	rodnae Grossu et Lupu, 1965 [30]	B	M	LC
	sturanyi (Simroth, 1894) [30]	B	M	LC
	turcicum (Simroth, 1894) [51]	B	M	NE
Family:	Boettgerillidae			
	Boettgerilla Simroth, 1910			
	pallens Simroth, 1912 [2] [33]	B	M	LC
	= *B. vermiformis* Wiktor, 1959			
Superfamily:	Arionoidea			
Family:	Arionidae			
	Arion A. Férussac, 1819			
	circumscriptus Johnston, 1828	B(LC)	M(NT)	NT
	distinctus Mabille, 1868	B	M	LC
	= *A. hortensis* Férussac, 1819 part.			
	fasciatus (Nilsson, 1823) [41]	B	M	LC
	intermedius (Normand, 1852)	B(NT)	M(VU)	NT
	lusitanicus Mabille, 1868 [2] [35]	B	M	LC
	rufus (Linnaeus, 1758)	B	M	LC
	silvaticus Lohmander, 1937 [41]	B	M	LC
	subfuscus (Draparnaud, 1805)	B	M	LC
	= *A. fuscus* (O. F. Müller, 1774)			

Superfamily:	Helicoidea			
Family:	Bradybaenidae			
	Fruticicola Held, 1838			
	fruticum (O. F. Müller, 1774)	B	M	LC
Family:	Hygromiidae			
Subfamily:	Helicodontinae			
	Helicodonta A. Férussac, 1821			
	obvoluta (O. F. Müller, 1774)	B	M	NT
Subfamily:	Monachinae			
	Euomphalia Westerlund, 1889			
	strigella (Draparnaud, 1801)	B	M	LC
	Monacha Fitzinger, 1833			
	cartusiana (O. F. Müller, 1774) [2) 8)]	B(NE)	M(NT)	NT
Subfamily:	Hygromiinae			
	Trichia Hartmann, 1840			
	hispida (Linnaeus, 1758)	B	M	LC
	sericea (Draparnaud, 1801)	B	M	LC
	villosula (Rossmässler, 1838)		M	VU
	Plicuteria Schileyko, 1978			
	lubomirskii (Ślósarskii, 1881)	B(VU)	M(LC)	NT
	Petasina Beck, 1847			
	edentula (Draparnaud, 1805) [43)]	B		EN
	unidentata (Draparnaud, 1805)	B	M	NT
	Helicopsis Fitzinger, 1833			
	striata (O. F. Müller, 1774)	B(CR)	M(EX?)	CR
	Candidula Kobelt, 1871			
	soosiana (J. Wagner, 1933) [7)]		M	CR
	unifasciata (Poiret, 1801)	B	M	CR
	Helicella A. Férussac, 1821			
	itala (Linnaeus, 1758)	B		EN
	Xerolenta Monterosato, 1892			
	obvia (Menke, 1828)	B	M	LC
	= *Helicella candicans* (L. Pfeiffer, 1841)			
	Cernuella Schlüter, 1838			
	neglecta (Draparnaud, 1805)	B		NT
	Perforatella Schlüter, 1838			
	bidentata (Gmelin, 1791)	B	M	NT
	= *P. bidens* (Chemnitz, 1786)			
	Monachoides Gude et Woodward, 1921			
	incarnatus (O. F. Müller, 1774)	B	M	LC
	vicinus (Rossmässler, 1842)	B(NT)	M(LC)	NT
	Pseudotrichia Likharev, 1949			
	rubiginosa (Rossmässler, 1838) [20)]	B	M	VU
	Urticicola Lindholm, 1927			
	umbrosus (C. Pfeiffer, 1828)	B	M	LC
Family:	Helicidae			
Subfamily:	Ariantinae			
	Arianta Turton, 1831			
	arbustorum (Linnaeus, 1758)	B	M	LC
	Helicigona A. Férussac, 1821			
	lapicida (Linnaeus, 1758)	B	M	LC
	Faustina Kobelt, 1904			
	faustina (Rossmässler, 1835)	B(VU)	M(NT)	VU
	Isognomostoma Fitzinger, 1833			
	isognomostomos (Schröter, 1784)	B	M	LC
	= *I. personatum* (Lamarck, 1792)			

	Causa Schileyko, 1971			
	holosericea (Studer, 1820)	B	M	NT
Subfamily:	Helicinae			
	Cepaea Held, 1838			
	hortensis (O. F. Müller, 1774)	B	M	LC
	nemoralis (Linnaeus, 1758)	B(LC)	M(NE)	LC
	vindobonensis (A. Férussac, 1821)	B	M	NT
	Helix Linnaeus, 1758			
	pomatia Linnaeus, 1758	B	M	LC
Class:	Bivalvia			
Subclass:	Palaeoheterodonta			
Order:	Unionoida			
Superfamily:	Unionoidea			
Family:	Margaritiferidae			
	Margaritifera Schuhmacher, 1816			
	margaritifera (Linnaeus, 1758)	B	M	CR
Family:	Unionidae			
Subfamily:	Unioninae			
	Unio Philipsson, 1788			
	crassus Philipsson, 1788	B	M	EN
	pictorum (Linnaeus, 1758)	B	M	LC
	tumidus Philipsson, 1788	B	M	VU
Subfamily:	Anodontinae			
	Anodonta Lamarck, 1799			
	anatina (Linnaeus, 1758)	B	M	LC
	cygnea (Linnaeus, 1758)	B	M	VU
	Pseudanodonta Bourguignat, 1877			
	complanata (Rossmässler, 1835)	B(EN)	M(CR)	EN
	Sinanodonta Modell, 1945			
	woodiana (Lea, 1834) [2) 10)]		M	NE
Subclass:	Heterodonta			
Order:	Veneroida			
Superfamily:	Sphaerioidea			
Family:	Corbiculidae			
	Corbicula M. von Mühlfeld, 1811			
	fluminea (O. F. Müller, 1774) [2) 11)]	B		NE
Family:	Sphaeriidae			
	Sphaerium Scopoli, 1777			
	corneum (Linnaeus, 1758)	B	M	LC
	rivicola (Lamarck, 1818)	B	M	EN
	Musculium Link, 1807			
	lacustre (O. F. Müller, 1774)	B	M	NT
	Pisidium C. Pfeiffer, 1821			
	amnicum (O. F. Müller, 1774)	B(EN)	M(CR)	EN
	casertanum (Poli, 1791)	B	M	LC
	henslowanum (Sheppard, 1823)	B	M	LC
	hibernicum Westerlund, 1894	B(EN)	M(CR)	EN
	milium Held, 1836	B	M	VU
	moitessierianum Paladilhe, 1866 [18)]	B	M	EN
	nitidum Jenyns, 1832	B	M	LC
	obtusale (Lamarck, 1818)	B(LC)	M(NT)	LC
	personatum Malm, 1855	B	M	LC
	pseudosphaerium Favre, 1927 [18)]	B	M	CR
	subtruncatum Malm, 1855	B	M	LC
	supinum A. Schmidt, 1851	B	M	VU
	tenuilineatum Stelfox, 1918	B	M	CR

Superfamily: Dreissenoidea
Family: Dreissenidae

Dreissena van Beneden, 1835			
polymorpha (Pallas, 1771) [2) 8)]	B	M	LC

1) missing or extinct species
2) non-native species
3) this taxon was subdivided into more species (in the Czech Republic *Stagnicola turricula*, *S. occulta*, *S. fuscus*, *S. corvus*; one further species, i.e. *S. palustris* s. str. has not been found yet in the Czech Republic)
4) problematic taxon (compare Jackiewicz 1993 versus Glöer & Meier-Brook 1994, Fechter & Falkner 1990 and Turner et al. 1998)
5) problematic form
6) eusynantroph
7) taxonomic position of this species is still problematic, some authors do not adopt it and consider this species synonymous with *Candidula unifasciata*
8) in southern Moravia probably native
9) Beran L. 1997: Menetus dilatatus (Gould, 1841) (Mollusca, Gastropoda) in Czech Republic. *Čas. Nár. Muz., Řada. Přírodověd.* **166**: 59–62.
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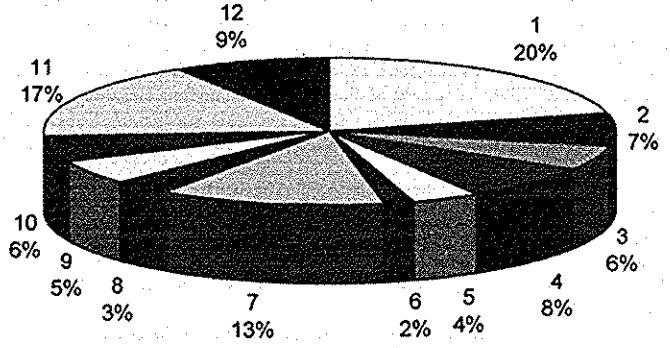

Fig. 1. The proportion of ecological groups. Ecological groups accorging to (Ložek 1964): 1 – closed forest, 2 – predominantly forest, 3 – humid forest, 4 – steppe – xerothermic habitats, 5 – open grounds in general, 6 – woodland and grassland predominantly dry, 7 – woodland and grassland mesic or different, 8 – humid habitats, 9 – wetlands, banks, 10 – small temporary waters, 11 – stagnant or moderately flowing waters, 12 – flowing waters.

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References are given for all species firstly recorded in the Czech Republic after 1956. In view of the fact that the last list of Czech molluscs was published in a book dealing with Quarternary molluscs, where slugs were not commented (Ložek 1964), we adopted the key of Czechoslovak molluscs (Ložek 1956) as the more suitable baseline.

The territory of the Czech Republic was divided into two parts (Bohemia and Moravia including the Czech part of Silesia) on the basis of historical development. This subdivision has lost its administrative role but is traditionally used in biological research. Bohemia is constituted by a single biogeographical subprovince (Hercynicum) whereas Moravia is constituted by four subprovinces (Polonicum, Carpathicum, Panonicum and Hercynicum). This is the main reason for the different distribution of some species.

The classification is according to Turner et al. (1998) with small modifications based on new information. B – species occurs in Bohemia; M – species occurs in Moravia and Silesia; the Red List categories are given in brackets separately for Bohemia and Moravia where the status in one part of the country is different from the status in the total Czech Republic (given in the last column): extinct – EX, critically endangered – CR, endangered – EN, vulnerable – VU, near threatened – NT, least concern – LC, not evaluated – NE (IUCN 1994).

RESULTS

Molluscs of former Czechoslovakia were divided into 12 groups on the basis of their ecological requirements (Ložek 1964). These subdivisions were proposed for paleontological use, but they are also successfully used for the ecological division of recent molluscs. Most freshwater molluscs in the Czech Republic belong to group 11; i. e. species of stagnant or moderately flowing waters (Fig.1). The species of small temporary waters (group 10) and of flowing waters (group 12) are represented to a lesser extent. Forest species of group 1, group 2 – mostly forest species inhabiting other shaded localities, and group 3 – hygrophilous forest species are the most successful ecological types corresponding to the potential climax vegetation in the Czech Republic. Man has substantially changed Central European landscape (habitats). The rather high percentage (13%) of eurytopic species (group 7) represents species that have adapted to these changes quite well.

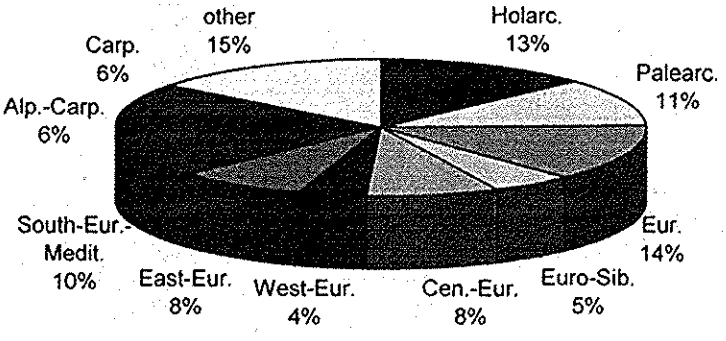

Fig. 2. The proportion of zoogeographical groups. Zoogeographical distribution according to (Alexandrowicz 1987, Ložek 1956).

Species of open habitats (groups 5 and 6) exploit man-made habitats or survive in extreme habitats such as rocks or rocky steps (group 4) – they account for 14% of the Czech mollusc fauna. The smallest groups are that of moderately moisture loving (group 8) and strictly hygrophilous species (group 9), together making up for 8% of our fauna.

The majority of Czech mollusc species (57%) have a relatively small range of distribution within Europe (Fig. 2). Species with South-Euroupean and Mediterranean ranges are the most frequent group (10%). But there are also important representatives of Central European (8%), East European (8%), Alpine-Carpathian (6%) and Carpathian (6%) species. These ranges show the main refugias of our fauna. Wide species ranges (Holarctic, Palaearctic and Europe) are represented to a lesser extent (43%). These types of distribution are typical of aquatic molluscs.

The Red Lists of the Czech Republic's molluscs which were previously published by Beran (1998) and Juřičková (1998) using IUCN categories has been divided up into regional Red Lists for Bohemia and Moravia. The shares of species assigned to the individual categories are shown in Fig. 3. The Red List includes 94 species assigned to the first four categories, i.e. 40% of all species recorded. This number is an alarming proof of the deterioration of the broad variety of natural habitats of our snails.

The following species were reported from the Czech Republic in the past, but collection specimens weren't preserved and the very existence of these species is consequently doubtful. This applies to: *Malacolimax kostali* Babor, 1893, *Arion vejdovskyi* Babor et Kostal, 1893 (Uličný 1892–1895). Hudec (1970) mentions the species *Deroceras subagreste* (Simroth, 1893) which was never found again. In view of the present range of this species (Wiktor 2000), the occurrence of this slug is very improbable. A single find of the non-native species *Vitrinobrachium breve* (A. Férus-

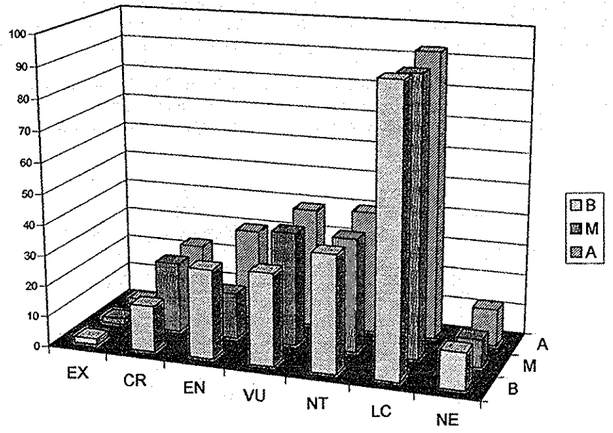

Fig. 3. The shares of species assigned to Red List categories B – Bohemia, M – Moravia, A – all the Czech Republic; EX – extinct, CR – critically endangered, EN – endangered, VU – vulnerable, NT – near threatened, LC – least concern, NE – not evaluated (IUCN 1994).

sac, 1821) has been reported (Flasar 1971), but it is now probably extinct on the single locality given (Flasar 1998). A single find of subfossil shells of *Sphaerium solidum* (Normand, 1844) was published by Petrbok (1957). The present occurrence of this sphaeriid clam in the Czech Republic is very unlikely. Several occurrences of the pill clam *Pisidium pulchellum* (Jenyns, 1832) were reported in the past, but detailed revision (Brabenec 1973) has shown, that in all cases the material was determinated incorrectly.

Physella heterostropha (Say, 1817) and *Deroceras panormitanum* (Lessona et Pollonera, 1882) probably live in the territory of the Czech Republic, but their occurrence has not been documented yet. These are non-native species found in bordering countries. The lymnaeid snail *Pseudosuccinea columella* (Say, 1824) was found in natural streams (Mácha 1971), but these specimens were flushed by effluent water from waste water plants. It is a common species of warmed-up greenhouse pools, aquariums etc. The survival of this species in nature during the colder parts of the year is unlikely. Records of the planorbid snail *Helisoma* cf. *trivolvis* (Say, 1817) in natural habitats are a similar case; this species is common in aquariums. The land snail *Zonitoides arboreus* (Say, 1816) is also common in greenhouses. No survival of the winter period by individuals introduced outdoors with soil has been observed.

237 species of molluscs have been recorded in the Czech Republic (incl. 75 fresh-water species): 211 species of the class Gastropoda (16 species of the subclass Prosobranchia, 195 species of the subclass Pulmonata) and 26 species of the class Bivalvia (8 species of the subclass Palaeoheterodonta and 18 species of the subclass Heterodonta).

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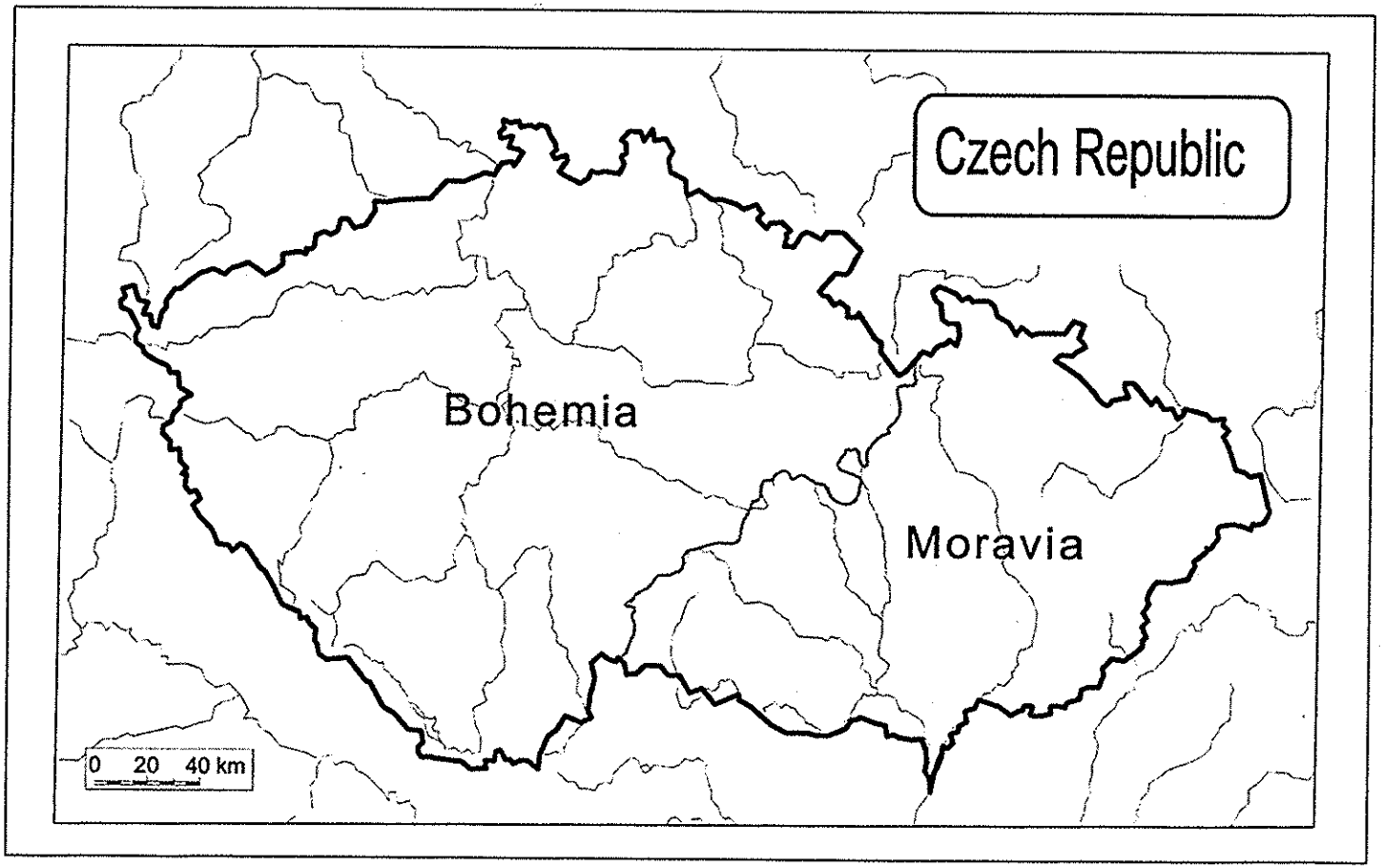
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