

A contribution to distribution of genus *Stagnicola* and *Catascopia* (Gastropoda: Lymnaeidae) in the Czech Republic

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This paper brings a contribution to the distribution of genus *Stagnicola* Jeffreys, 1830 and *Catascopia* Meier-Brook & BARGUES, 2002 in the Czech Republic. Occurrence of four species has been confirmed in the Czech Republic so far. Two species – *Stagnicola corvus* (Gmelin, 1791) and *S. palustris* (O.F. Müller, 1774) (including *S. turricula* (Held, 1836)), are widespread and common especially in lowlands along bigger rivers (Labe, Ohře, Morava, Dyje, Odra). Occurrence of *S. fuscus* (Pfeiffer, 1821) is restricted to the territory of the north-western part of Bohemia and *Catascopia occulta* (Jackiewicz, 1959) is a rare species with only two known sites.

Key words: Mollusca, Gastropoda, *Stagnicola*, *Catascopia*, distribution

Introduction

Genus *Stagnicola* Jeffreys, 1830 comprises gastropods of medium size, with gradually increasing whorls and anthracite black pigmentation of their conchs. Only one species, *Stagnicola palustris* (O.F. Müller, 1774), was accepted 1959. Later JACKIEWICZ (1959) divided this taxon into several species, *Stagnicola palustris* (O.F. Müller, 1774), *S. turricula* (Held, 1836), *S. fuscus* (Pfeiffer, 1821), *S. occultus* (Jackiewicz, 1959), *S. corvus* (Gmelin, 1791). These species were distinguished by proportions in male copulatory organs, shape of the bursa duct, and numbers of folds in the prostate gland. BARGUES et al. (2001) confirmed that three taxons, *S. palustris*, *S. corvus*, *S. fuscus* are valid species in contrast to *S. turricula* which is not different from *S. palustris*. MEIER-BROOK & BARGUES (2002) separated species *S. occultus* from the genus *Stagnicola* and described a new genus *Catascopia* Meier-Brook & BARGUES, 2002, the separation was confirmed by BARGUES et al. (2005).

In the Czech Republic the occurrence of only one species *Stagnicola palustris* with two different forms *S. palustris* f. *corvus*, *S. palustris* f. *turricula* had been mentioned in the past (ULIČNÝ 1892–1895, LOŽEK 1948, 1956). HUDEC & BRABENEC (1966) were the first who distinguished different species of the genus *Stagnicola*. These authors documented the occurrence of three species – *S. turricula*, *S. corvus* and from one site also *S. occultus*. In 2000 another species – *S. fuscus* – was recorded from Western Bohemia (BERAN 2002a) and in 2001 the same author also found taxon *S. palustris* s. str. (BERAN 2002b). Data about the distribution of genus *Stagnicola* in the Czech Republic until 2000 were summarised in BERAN (2002b), but some older data about distribution of *S. turricula* and *S. corvus* might be incorrect due to the fact, that some authors determined this species without dissection.

Material and methods

The data used in this study are from the author's database of over 45.000 records of aquatic molluscs, most of which were obtained by field research during the previous 10 years. The remainder comes from Czech museum collections, published papers and unpublished records of other researchers. Only records where specimens were dissected and then identified using their copulatory organs were used only. Many of the older and also recent records could not be used because authors classified their records only as *Stagnicola* sp., *S. palustris* s.lato, *S. palustris* agg.

The main sampling method for aquatic molluscs was to wash vegetation or sediments using a metal sieve (kitchen strainer, diameter 20 cm, mesh size 0.5–1 mm). This was combined with a search of various substrates present: stone, wood and artificial surfaces (e.g. plastic bags and bottles). These methods were used also for collecting of *Stagnicola* spp. Collected specimens were killed with hot water and dissected or fixed in 70% ethanol and then dissected and identified using their copulatory organs (see e.g. JACKIEWICZ 1993, GLÖER 2002).

Results and Discussion

Stagnicola palustris (O.F. Müller, 1774), including *S. turricula* (Held, 1836)

Distribution: This species is widespread in lowlands, e.g. along big rivers as Elbe, Odra, Morava, and Dyje and extensive basins, e.g. in Southern Bohemia.

Altitude: 146–620 m, but most data are from 150–300 m. Habitats: pools, oxbow lakes, ponds, wetlands, slowly flowing waters.

Category in the Red list (BERAN et al. 2005): Least Concern (LC).

Stagnicola corvus (Gmelin, 1791)

Distribution: This species is widespread in lowlands and extensive basins, e.g. in Southern Bohemia. In comparison with *S. palustris* it is more widespread in the Elbe River Basin and in Southern Bohemia and surprisingly it is rare in Central and Southern Moravia along the Morava and Dyje River (compare Figs 1 and 2).

Altitude: 146–773 m. Most data exist from 150–300 m,

but this gastropod was found for example also in the Lipno reservoir and its surroundings in altitudes about 725 m (BERAN & DVOŘÁK 2006) and from a pond near Volary in 773 m (DVOŘÁK, unpubl. data).

Habitats: pools, oxbow lakes, ponds, wetlands.

Category in the Red list (BERAN et al. 2005): Least Concern (LC).

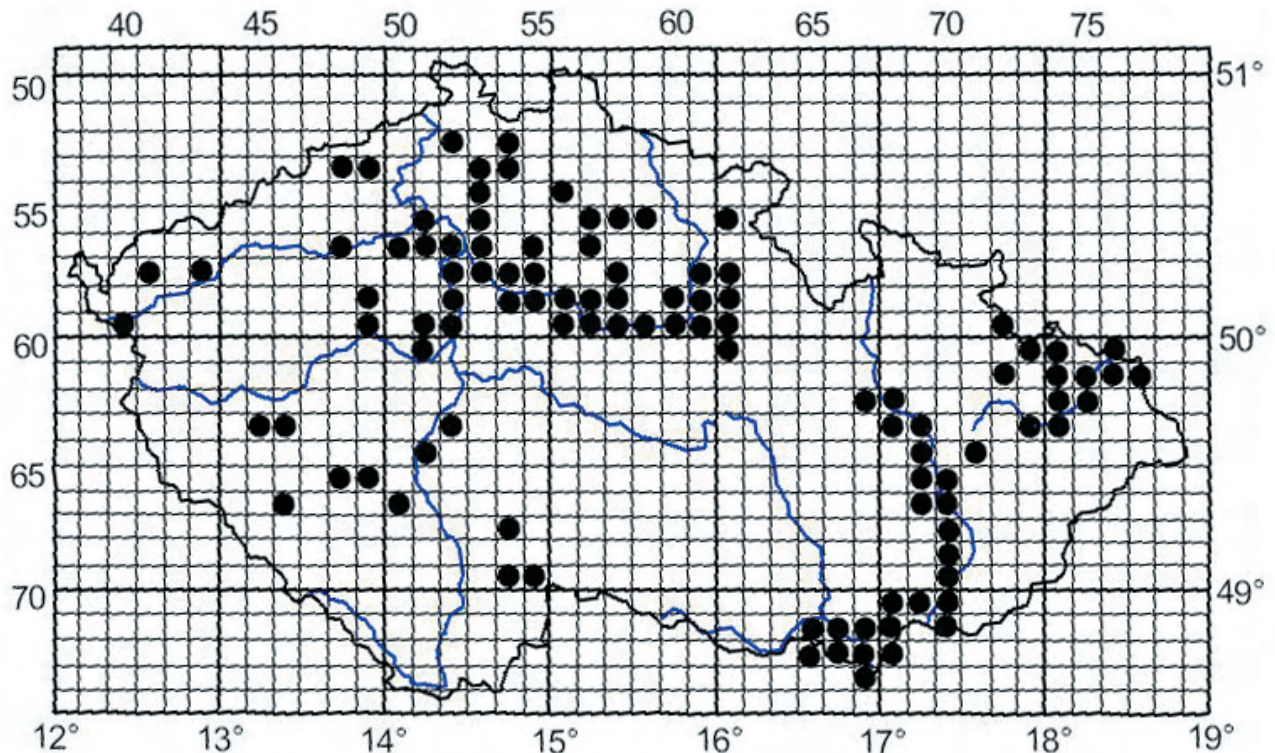


Fig. 1. Distribution of *Stagnicola palustris* in the Czech Republic.

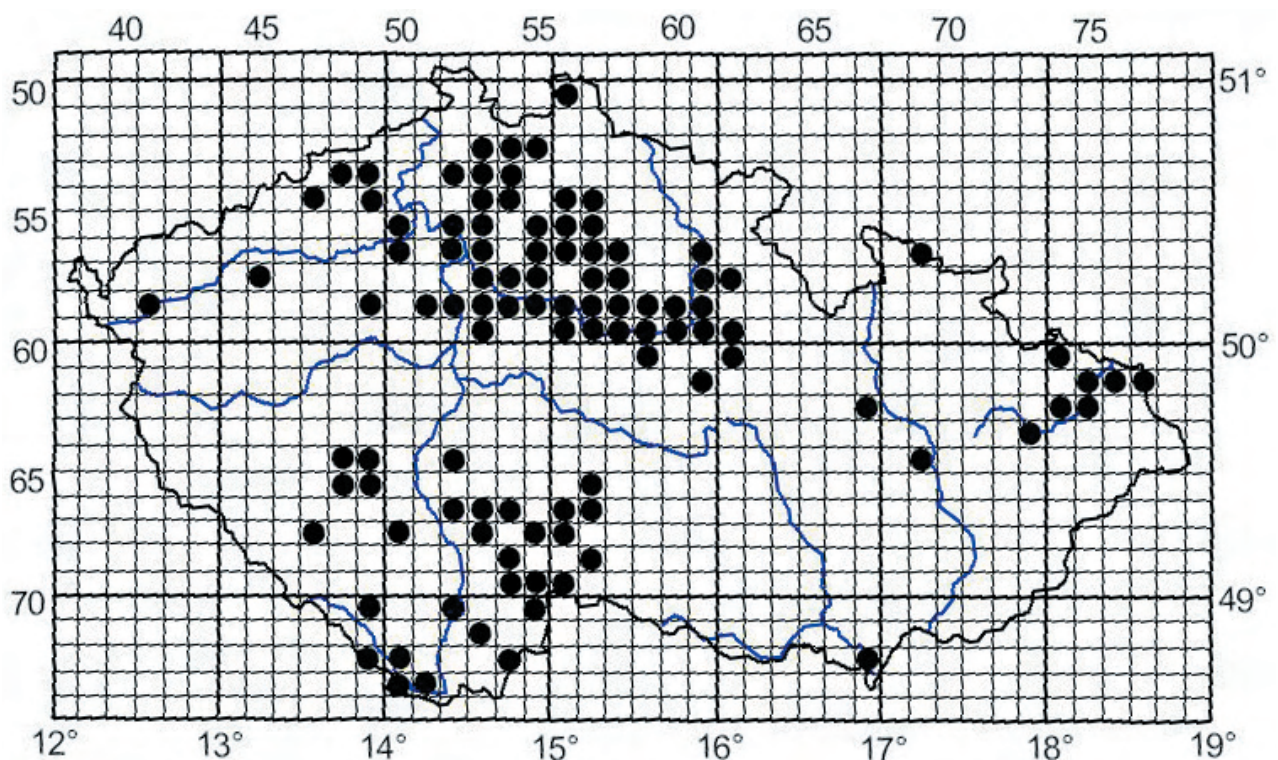


Fig. 2. Distribution of *Stagnicola corvus* in the Czech Republic.

Stagnicola fuscus (C. Pfeiffer, 1821)

Distribution: This species was first recorded in year 2000 from Western Bohemia near Kynšperk nad Ohří (BERAN 2002a). In 2003 the same author found this species in the surroundings of Svatá Kateřina (HLAVÁČ et al. 2003) near Czech–German borders also in Western Bohemia. In 2005 and 2007 he also found the species in Northern Bohemia near Česká Lípa town in the Novozámecký rybník Nati-

onal Nature Reserve and in the Jestřebské slatiny proposed National Nature Reserve. In 2008 more sites (11) near Kynšperk nad Ohří and one site near Přimda were found by the author. Present data documented its distribution only in the western margin of Bohemia and in Northern Bohemia.

Altitude: 259–628 m.

Habitats: All sites were temporary wetlands (with *Gly-*

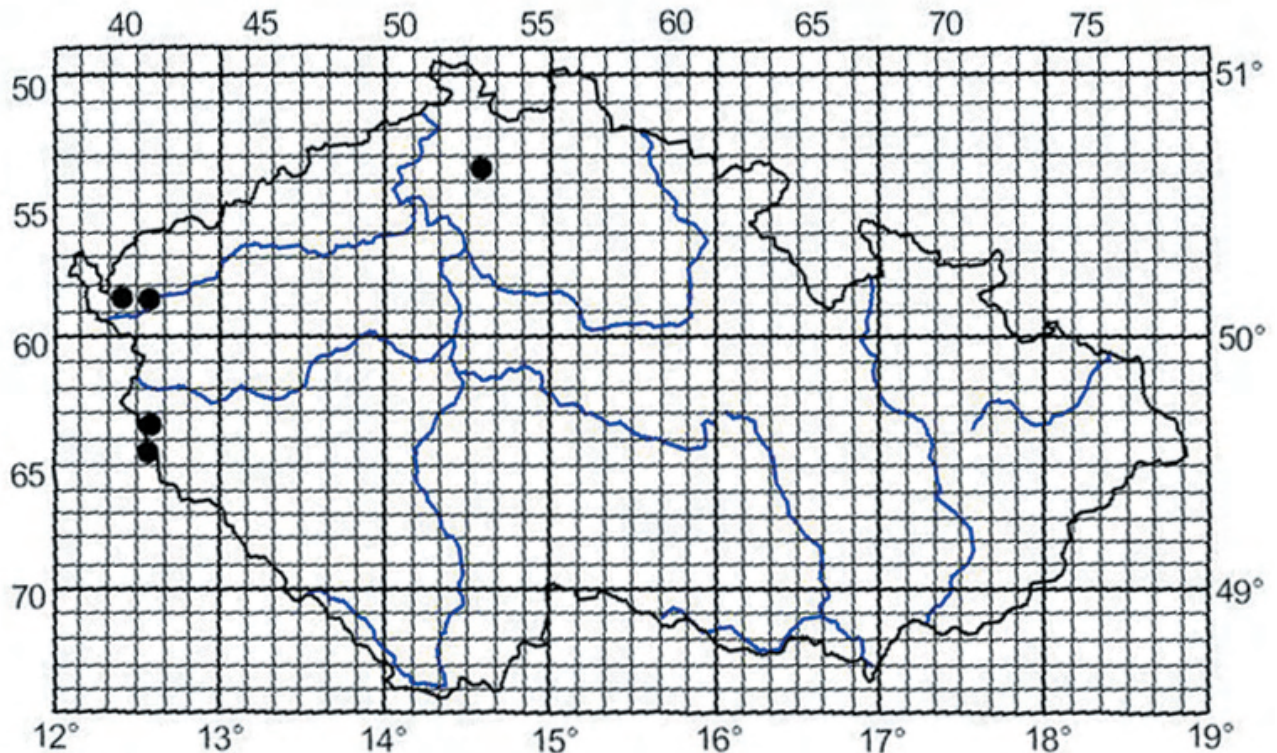


Fig. 3. Distribution of *Stagnicola fuscus* in the Czech Republic.

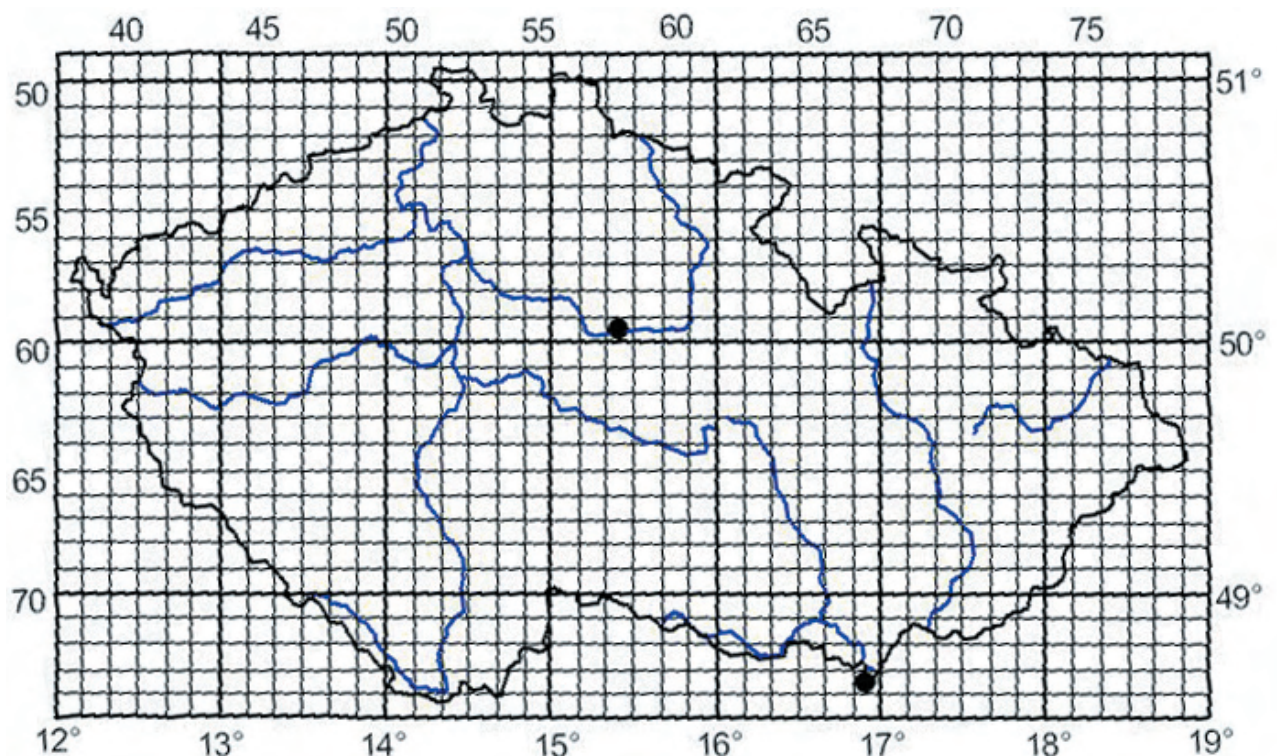


Fig. 4. Distribution of *Catascopia occulta* in the Czech Republic.

ceria, *Carex*) or margins of overgrown oxbow lakes or ponds.

Category in the Red list (BERAN et al. 2005): Vulnerable (VU).

Catascopia occulta (Jackiewicz, 1959)

Distribution: This species was first found on 8 Apr 1965 (more precisely on 31 May 1942, but this material was identified as *S. turricula*) by J. Brabenec in a small temporary pool near Kladruby nad Labem (Eastern Bohemia) (BRABENEC & HUDEC 1966). The occurrence of this species in the same site was confirmed by author in 2002, 2003 and 2008, although Brabenec (1978) considered this site to be destroyed. In 2008 this mollusc was found in temporary pool near the inflow of the Dyje River to the Morava River (Southern Moravia, geographical coordinates, 48°39'45" N, 16°57'06" E). No other site of this species has been known so far.

Altitude: 221 and 155 m a.s.l.

Habitats: Both sites are temporary lowland wetlands (pools).

Category in the Red list (BERAN et al. 2005): Critically Endangered (CR).

Altogether three species of the genus *Stagnicola* and one species of the genus *Catascopia* were found in the Czech Republic up to 2008. Two species – *S. corvus* and *S. palustris* are widespread and common especially in lowlands along bigger rivers (Labe, Ohře, Morava, Dyje, Odra). Their distributions are very similar, but *S. palustris* occurs more often in Moravia while *S. corvus* is more common in Bohemia and surprisingly it is rare in Central and Southern Moravia along the Morava and Dyje Rivers. Occurrence of *S. fuscus* is restricted to the north-western part of Bohemia and *C. occulta* is a rare species with only two known sites.

In the Red List of the Czech molluscs *S. corvus* and *S. palustris* are classified as Least Concern (LC) while *S. fuscus* is classified as Vulnerable (VU) and *C. occulta* as Critically Endangered (CR) (BERAN et al. 2005). This classification is in accordance with my results.

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