

***Hydrochus flavipennis* KÜSTER, 1852 (Coleoptera: Hydrochidae),
a species new for the fauna of Poland**

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ABSTRACT. *Hydrochus flavipennis* KÜSTER, 1852 has been recorded for the first time in Poland from a shallow meadow pool in Lublin (E Poland). The collecting locality is described.

KEY WORDS: Coleoptera, Hydrochidae, *Hydrochus flavipennis*, new record, Poland.

INTRODUCTION

The genus *Hydrochus* LEACH, 1817 is a single genus of the family Hydrochidae. It is widely distributed all over the world and represented by about 100 species (HANSEN 1995). There are 14 species known from Europe (ANGUS 1977, BERGE HENEGOUWEN 1988, VAL-LADARES et al. 1998, CASTRO & DELGADO 1999), and few of them have been described or classified into separate species only recently. Six species have been recorded in Poland, so far (BURAKOWSKI et al. 1976, 2000).

H. flavipennis KÜSTER, 1852 was regarded as a species separate from *H. angustatus* GERMAR, 1824 by ANGUS (1977). Earlier, it had been treated differently by various authors, mostly as a subspecies of *H. angustatus*. During the studies conducted in the year 2003, the species was collected in Poland for the first time.

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MATERIAL AND METHODS

A qualitative sample was taken with a hydrobiological scoop and preserved in 70% ethanol. Sixty one beetle specimens were collected, among them a single representing *Hydrochus flavipennis*. Water parameters (temperature, pH, electrolytic conductivity) given in this paper were measured using the Slandi TM204 thermometer, Slandi PH204 pH-meter, and Slandi CM204 conductometer.

The examined material is preserved in the first author's collection. The documentation of research is in the second author's collection at the Department of Zoology, Maria Curie-Skłodowska University, Lublin.

RESULTS

Description of the locality

POLAND: Lublin-Zembożyce, at Cienista Street [UTM: FB07; 51°11' N, 22°28' E], meadows in the flood terrace of the River Bystrzyca, a strongly astatic water body (Fig. 1). The surface of 0.1 ha, the depth of 0.2-0.5 m. Water transparent, brownish. The bottom of clay and sand hard, a little muddy only in the deepest parts. *Typha angustifolia* dominated in the vegetation, occupying the greater part of shallow parts of the water body with *Phragmites australis* at margins. Moreover, flooded grasses and the large patches of *Drepanocladus aduncus* at the banks, *Ranunculus* sp. on the bottom, and patches of *Iris pseudacorus* and single clumps of *Juncus effusus* in some places.

Some water parameters (measurement taken at 30-IV-2003): temperature: 15.6 °C, pH: 7.48, electrolytic conductivity: 1501 $\mu\text{S}\cdot\text{cm}^{-2}$.

Material collected

The species new for the Polish fauna: *Hydrochus flavipennis* KÜST.: 2.IV.2003, 1 female (Fig. 2).

Co-occurring species: *Helophorus grandis* ILL. – 6 exx., *H. granularis* (L.) – 19 exx., *H. minutus* FABR. – 5 exx., *Anacaena limbata* (FABR.) – 1 ex., *A. lutescens* (STEPH.) – 7 exx., *Hydrobius fuscipes* (L.) – 19 exx., *Ochthebius minimus* (FABR.) – 1 ex., *Hydraena riparia* KUG. – 1 ex., *Limnebius parvulus* (HERBST) – 1 ex.



Fig. 1. The sampling site in Lublin-Zemborzyce (Phot. by P. Buczyński).



Fig. 2. *Hydrochus flavipennis* KÜST., the specimen from Lublin-Zemborzyce (Phot. by E. Baraniak).

DISCUSSION

H. flavipennis KUG. differs from very similar and closely related *H. angustatus* GERM. in the following features (determination is possible when comparing both species): size on the average smaller, body shorter and broader, spots on the tips of elytrae smaller, the base of the pronotum slightly narrower than the base of elytrae, body lighter without metallic lustre (rarely metallic lustre is very weak). *H. angustatus* GERM. – bigger, body strongly elongated with parallel margins, spots on the tips of elytrae enlarged, the base of the pronotum as broad as the base of elytrae, body darker with clear greenish or purple metallic lustre. Males of both species differs from each other by the genital structures (ANGUS 1977).

According to ANGUS (1977) *H. flavipennis* KÜST. is widely distributed from Morocco through South Europe to the Middle Asia and East Siberia. On the south of Europe it is common and widely distributed over the whole of the Mediterranean zone. It is also reported from the fossil remnants of Great Britain. ANGUS (1977) suggests also that HORION'S (1949) data on *H. angustatus* GERM. from the Kraatz's collection gathered in Silesia refer to *H. flavipennis* KÜST. Those data are cited in the Catalogue of the Polish Fauna (BURAKOWSKI et. al. 1976) for *H. angustatus* GERM. Basing on those data, we can conclude that the determination of the Polish specimens should be verified, because there is a possibility that their greater part refers exactly to *H. flavipennis* KÜST.

Environmental requirements of *H. flavipennis* are poorly known. ANGUS (1977) caught it in Siberia and Spain in shallow grassy pools in spring and early summer, in Spain also in streams. The locality described in this paper also confirms these information.

Nowadays, there are seven species of the genus *Hydrochus* LEACH known from Poland, namely *H. angustatus* GERM., *H. brevis* (HERBST), *H. carinatus* GERM., *H. elongatus* (SCHALL.), *H. flavipennis* KÜST., *H. ignicollis* MOTSCH., *H. megaphallus* BERGE.

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