

**Last record of *Palingenia longicauda* (OLIVIER) (Ephemeroptera:
Palingeniidae) in Poland**

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ABSTRACT. The author draws attention to an angling account, concerning the 1950'ies, in which there is a reference to a big mayfly in the River Vistula. In the author's opinion this is the last known reference pertaining to *Palingenia longicauda*, today an extinct species.

KEY WORDS: Poland, Ephemeroptera, *Palingenia longicauda*.

INTRODUCTION

Although *P. longicauda* was the largest mayfly in Poland, which once occurred in huge numbers, there are very few records of this species. JAROCKI (1827) and SOBIESZCZAŃSKI (1878) reported it from Vistula in Warsaw, while HAGEN (1854, 1859, 1888) from the rivers Odra, Kwisa and Vistula near Gdańsk. ULMER (1927) stated, that a few specimens collected near Gdańsk by Schindofsky were in the collection of Selys, while a few collected by Dohrn - in the Vienna museum. However, this record is doubtful (CIOS 2005). In the collection of the Institute of Zoology in Warsaw of the Polish Academy of Science there is one specimen labeled – “overflow-arms of Vistula, ca. 15 June 1906”. Later MIKULSKI (1936) mentioned this species from Poland, but indicated the rivers Strwiąż, Seret and Dniestr, nowadays on the territory of Ukraine, all three of them in the Black Sea drainage area. Already NOWICKI (1865) and DZIĘDZIELEWICZ (1867) reported this species from these rivers.

SOWA (1980) expressed doubt, whether the species still existed in Poland. Today it is considered extinct (KŁONOWSKA-OLEJNIK).

The purpose of this brief note is to draw attention to another reference to this mayfly. It is the last known record of this species in Poland.

RESULTS

During my conversations with Jan Marek KOCHAŃSKI (born in 1943) from Warsaw, a keen angler-naturalist, my special attention was drawn to his accounts of mayflies. Upon my request he put on paper everything that he remembered from his youth. In the first account KOCHAŃSKI (2005) presented observations on mayflies in the rivers Bug and Vistula (downstream of confluence with Bug). In the beginning I interpreted his references as pertaining to *Ephoron virgo*. However, after later discussions with him and some clarifications, I came to the conclusion that he had seen two distinct species. The one in Bug was *Ephoron virgo*, but the identity of the second one was unclear. Therefore I asked him to prepare a more detailed account. This he included in a description of angling in the River Vistula near Drwały, downstream of Wyszogród, close to the mouth of the River Bzura, in the 1950'ies (KOCHAŃSKI 2008). I present here a translation of relevant fragments of interest here:

„Here is one [observation] concerning, as it appears, a nuptial flight of mayflies, perhaps one of the last ones, in view of the degradation of the environment in our country. [...here follows an account of good pikeperch fishing...] And then on a certain day in June the fishing results were nil, since the capture of an undersized pike-perch, didn't change the impression. Fish of all species seemed not to notice us and our efforts. They were busy with taking from the water surface insects, which looked like moths, or butterflies, the size of the large white butterfly [*Pieris brassicae*], all similar, very light-beige coloured. They flew up and down to the water. At times, it was possible to get the impression that snow is falling, but the snow was also going up! Discouraged by poor results, we soon went home”.

From his account it appears that he has seen the nuptial flight of *P. longicauda*. This can be deduced from the period of the flight (June), large size and whitish colour of the insects. The time of the day was afternoon. No other species of mayflies present in Vistula would fit into this description. Kochański also informed me, that the specimens from the River Bug were different from those in the River Vistula.

DISCUSSION

The scarcity of references to *P. longicauda* in Poland is striking, in spite of the large size of the insect and its commonness in the past. Lack of references in old entomological literature may be due to avoidance of large rivers by researchers, since it was much easier to collect mayflies in smaller running waters. Access to River Vistula in non-urban areas was by no means easy due to wide flood-land and lack of good roads.

All the known reports of *P. longicauda* from the River Vistula concern the middle (Warsaw) and lower (Gdańsk) sections. This seems to indicate that the species was less common upstream, perhaps even absent in the area of Kraków, where many entomologists were present already in the second half of the 19th century, who would have noticed the presence of this insect. It is also possible that industrial pollution of the water, originating in

the Silesia region, eliminated the species in a long stretch of the river downstream in the first half of the 20th century, if the species once thrived there.

The account by KOCHAŃSKI is currently the only known reference to *P. longicauda* after 1906. Thus the species thrived in the River Vistula still in the late 1950's. Maybe the inflow of cleaner water from the River Bug rendered possible the existence of this species in the lower section of the River Vistula for a longer period than in the more polluted upstream part. The construction of the dam in Włocławek in the years 1963-1970 as well as increasing pollution seem to be the last nails in the coffin of *P. longicauda* in Poland.

Finally, I would like to stress that the contribution of fishermen to the knowledge of mayflies has always been very important. Several of the oldest reports on mayflies were based on information supplied by fishermen, who knew well these insects. Thus their accounts shouldn't be neglected even today in the study of these insects. Being by the water very often and in many remote places, they may observe phenomena, which might escape the eye or net of a professional entomologist.

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