

Supervisor's statement for the bachelor thesis

“Cytogenetic analysis of sex chromosomes in representatives of the tribe Heliconiini”

by Magdaléna Vališová

With new sequencing technologies there is a growing number of female lepidopteran genomes with bits of a W chromosome sequenced and assembled. Premature conclusions have been made about evolution of W chromosome in Lepidoptera, without any verification of in silico results. The aim of the present thesis was to cytogenetically verify recently published bioinformatic findings on molecular composition of W chromosomes in representatives of the tribe Heliconiini.

Challenging the work of an international team from the top universities may seem a daunting task for an undergraduate student, but Majda did not waver. When supply of material was limited, females did not lay eggs and there were no larvae, Majda did not give up. She cut the females open and made preparations from them. She learned in situ hybridizations and fulfilled the aim and proved the international team from the top universities wrong. Moreover, her careful analysis of her results revealed variation in pairing of W and Z chromosomes in *Eueides isabella*, which will, no doubt, inspire future studies.

She did all that smiling (most of the time) while working another job and teaching English to children. She also decided to acquire her own funding for the project and applied for the SGA grant which she got and she has already secured another funding for a follow-up study.

To conclude, Majda is smart and hard working student and I am very happy with her work and resulting thesis and recommend it for defense.

May 19 2023 in Holubov,

Petr Nguyen