

## Annotation of project VEGA 1/0678/11

Broomrapes (*Orobanche* spp. and *Phelipanche* spp.) are root parasites that are dependent upon host plants for nutrients and water. Weedy species damage crop plants. The growth of the hosts is retarded and losses range from 5-100%. The project will map broomrape distribution in Slovakia, analyze volatile organic compounds, and record natural enemies and pollinators. Weedy (mostly *Phelipanche*) and not weedy (*Orobanche*) species will be compared, pollination patterns and host preference of *Phytomyza orobanchia*, a most important natural enemy of broomrapes pointed out. The efficacy of *P. orobanchia* to reduce seed production will be evaluated and attention will be devoted to its parasitization. Determination key of Slovak broomrapes based on volatiles emitted will be created. The project output will be a comprehensive, new study on Slovak broomrapes, which will provide data for safer technology for their control. The project will be extension of successful FP7 of principal investigator at Wageningen University.

Duration of the project: 2011 - 2013

Principal investigator: Peter Tóth



*Orobanche flava*



*Phelipanche ramosa*