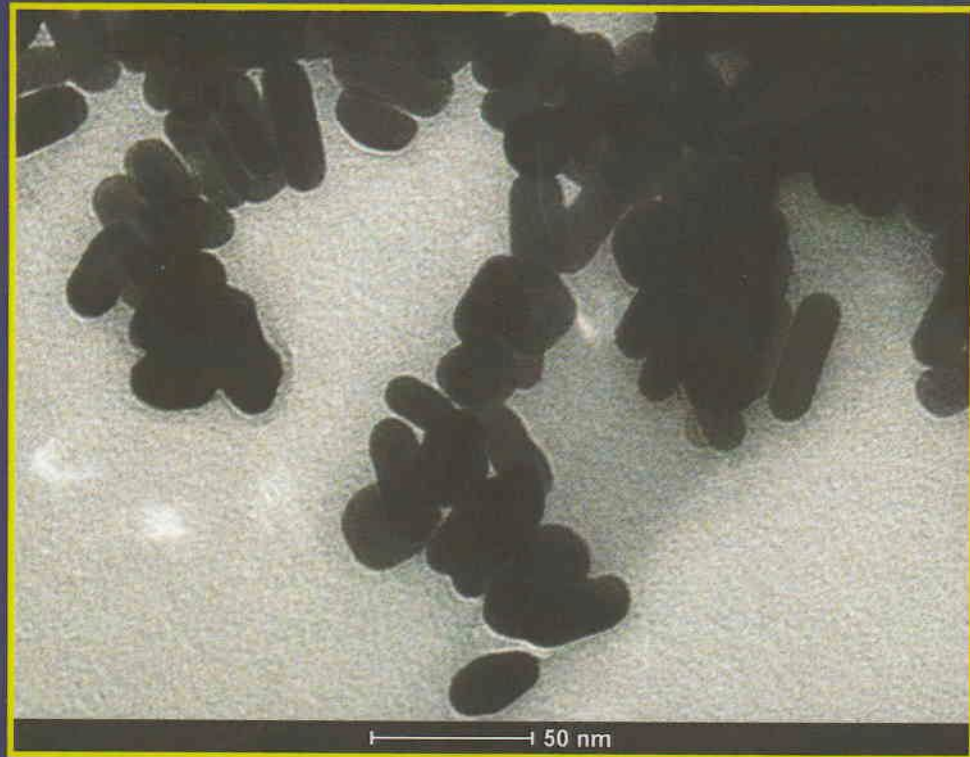


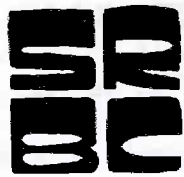
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BAIA MARE**

PROSPECTS OF USING OF MOLECULAR METHODS OF INSECTS SYSTEMATICS FOR THE STUDY OF INVASIVE SPECIES

Vladyslav Mirutenko

Uzhhorod National University, Ukraine, Uzhhorod, A. Voloshyn Str., 32

E-mail: vmir.ukr@gmail.com

Introduction. Distribution of invasive species, including insects, into new territories becomes more and more widespread. These species are a big problem for native species of organisms. In addition, these species are cause of significant economic damage for various sectors of economy.

Materials and Methods. A using of modern methods of molecular systematics and karyosystematics in establishing of closest phylogenetic "relatives" for alien species could help to define their possible natural enemies in new territories for them. Application of molecular criteria appears to be all the more important when constructing a system for groups of organisms with high morphological and specific diversity, especially such as Coleoptera and Lepidoptera.

Results and Discussions In particular, as for horse-chestnut leaf miner a question of its origin is contentious yet. If the definition of parental areal will be successful then thought out introduction and using of natural enemies as regulators of numbers of these invasive species become possible within their secondary area. Last years, the DNA-sequence of gene Cytochrome-c-oxidase I (COI) is becoming widely used in molecular systematics of insects for species identification and for specification of phylogenetic relationships of different species and taxonomic groups. Marker genes such as the gene COI are less variable and more uniform, which allows them to be used as a criterion of genus, tribe, and other systematic groups for all insects.

Conclusion. In addition, investigations of mechanisms of ecological relationships "plant - phytophages" at the cellular level could also help invented new methods and ways to reduce of the number of invasive species. Currently, scientists of the Uzhhorod National University just begin versatile researches of the invasive insect species and problems of the invasions in a broadest sense.

Keywords. molecular methods, insects, invasive species

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