

ALLOZYME ANALYSIS OF THE TEMPORAL POPULATIONS OF *ECHINOSTOMA REVOLUTUM* COLLECTED FROM DOMESTIC DUCKS IN KHON KAEN PROVINCE, THAILAND

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Abstract. Four temporal populations of *Echinostoma revolutum* (ER1, ER2, ER3, ER4) were collected from domestic ducks in Khon Kaen Province, Thailand during February - October 2008. The ER1, ER2, ER3 and ER4 were collected in February, April, June and October, respectively. The 12 enzymes encoding 15 loci were examined. Two loci were found in each of 3 enzymes, namely glucose-6-phosphate dehydrogenase (G6PD), malic enzyme (ME) and peptidase valine-leucine (PEPA). Of these, three loci, namely, *G6pd-1*, *Me-1* and *PepA-2*, were polymorphic. Genotypes were assigned for the specific allelic profiles detected at these three polymorphic loci. Twenty-eight genotypes were observed in the 4 temporal populations of *E. revolutum*. Three genotypes, Er₂₂, Er₂₃ and Er₂₅, were found in all populations. The Er₆ genotype occurred had the highest frequency of all the populations. These 28 genotypes were clustered into 3 groups with genetic differences of 2-12% among the loci. A cluster of genotypes (Er₁, Er₃, Er₉ and Er₁₂) showed the greatest genetic difference among the genotypes (12% difference). These results show intraspecific variation exists in *E. revolutum* populations in domestic ducks from Khon Kaen Province, Thailand.

Keywords: *Echinostoma revolutum*, allozyme, temporal population, domestic duck, Thailand

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