

SPECIES IDENTIFICATION OF THE *ANOPHELES FLUVIATILIS* COMPLEX (DIPTERA: CULICIDAE) USING PHYLOGENETIC ANALYSIS PCR-SEQUENCING IN SOUTHWESTERN IRAN

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Abstract *Anopheles fluviatilis* is one of the most important malaria vectors in Iran. The aim of this study was to identify *Anopheles fluviatilis* complex species using proliferation and sequence analysis of ITS2 and also 28S- D3parts of rDNA gene in southwestern Iran. In this research *Anopheles fluviatilis* was caught from different areas of Kohgiluyeh and Boyer-Ahmad province at southwestern Iran in 2013. DNA was taken from 4 *Anopheles fluviatilis* selected samples and PCR tests of 28S- D3 part were done on these DNA samples. Then after the sequence results were obtained, these were identified and compared with similar samples of *Anopheles fluviatilis* based on data from a gene word bank. Phylogenetic tree and individual sequences of samples were calculated. PCR Phylogenetic analysis of r DNA 28S-D3 part of *Anopheles fluviatilis* confirmed that U genotype in Kohgiluyeh and Boyer-Ahmad province was identified. The gene length of r DNA 28S-D3 part between populations of this species was the same (333bp). This study showed that *Anopheles fluviatilis* has a species separate branch in southwestern Iran which is different to the branch of southeastern Iran (Hormozgan, Kerman and Sistaan & Baluchestaaan provinces).

