Ain Shams University
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Bio-assessment of *Moringa oleifera* Lamarck (Order: Brassicales, Family: Moringaceae) on some of dipterous insects of medical importance from Nuweiba City, South Sinai

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{ قالوا سبحانك لا علم لنا إلا ما
علمتنا إنك أنت العليم الحكيم }

صدق الله العظيم
سورة البقرة " آية 32 "

List of Abbreviations

Abbreviation	Meaning
Kg	Kilogram
g	Gram
hr	Hour
ppm	Part per million
ml	Milliliter
L	Liter
mg	Milligram

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Abstract

The present study aimed to study the abundance and distribution of dipterous insects of medical importance colonize Nuweiba City, South Sinai governorate, Egypt during 2019 and to evaluate the insecticidal efficacy of *Moringa oleifera* crude seed extract against representative dipteran insects. According to our final findings, 374 specimens representing eleven species, nine genera and six families; Muscidae, Sarcophagidae, Ulidiidae, Ephydridae, Culicidae and Calliphoridae were collected and identified. Families of Muscidae and Culicidae witnessed the highest number of the reported species compared to the other families. Among the collected species, flies of *Musca domestica* (Muscidae) and larvae of *Culex pipiens* (Culicidae) fulfilled the lion share among the captured species throughout the surveying period, which was the main cause beyond testing the insecticidal capability of *Moringa* seed extract against their larval stages.

Accordingly, a series of aqueous concentrations of *Moringa* seeds extract were prepared and bioassayed against larval stages of *Musca domestica* (2^{nd} instar) and *Culex pipiens* (3^{rd} instar). The overall results revealed that the percentage of larval mortality showed proportional increase with the applied concentrations and the exposure time. *Moringa* seed extract showed latent or extended effects on pupal and adult stages that emerged from the treated larvae. Based on the LC_{50} values, *Moringa* seed extract recorded 35.79 and 40.04 ppm, while LT_{50} recorded 12 day and 5 days at 100 ppm against the larval stages of *C. pipiens* and *M. domestica*, respectively.

Keywords: *Moringa oleifera, Culex pipiens, Musca domestica,* larvicidal effect, Bioassay, Seed extract, Nuweiba City.