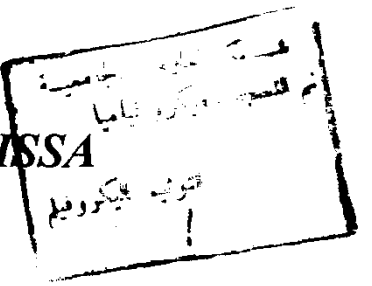
# ON THE COLD SEASON SQUALLS OVER NORTH EGYPT AND THEIR IMPACT ON DESERT DEVELOPMENT

BY

*MOHAMED MAHMOUD EISSA*



THESIS

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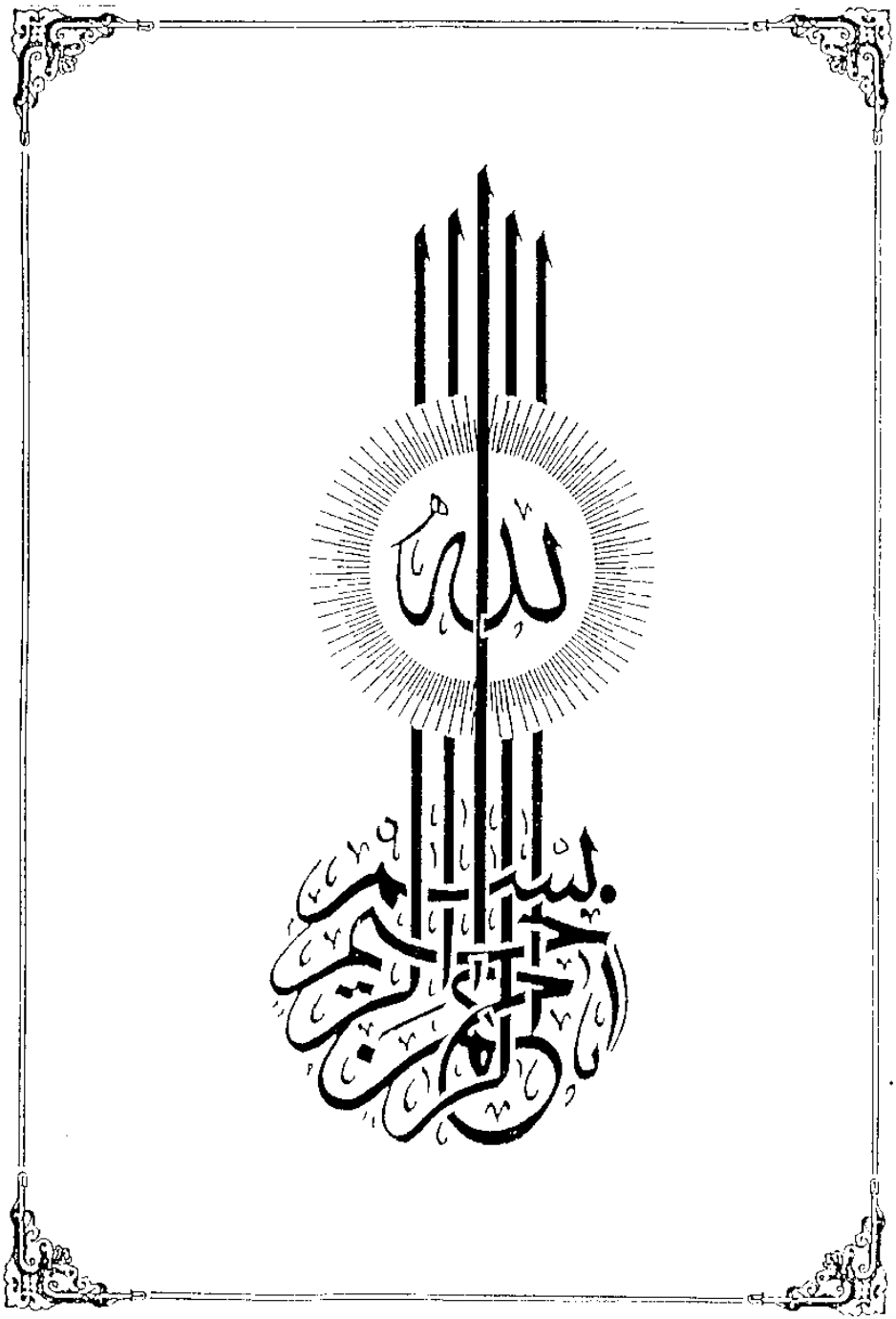
## ABSTRACT

Climatological study is carried out to determine the periods of occurrence of squalls that affect different districts of North Egypt,their frequency of occurrence ratio, mean, the highest and lowest values of their associated weather elements. Two Agrometeorological case-studies are presented to show the effect of squalls on chilling requirements on deciduous fruit trees and on microclimate under plastichouses.



Key words :Squalls, Climatology, Agrometeorology, Microclimatology.



## Approval Sheet

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# *Introduction*

# *1- Introduction*

Most of the previous studies on squalls are merly fragmentary and of descriptive nature. They are merely records of their occurrence over Alexandria. These studies have been carried out for the interest of populace such farmers interest in El Khamasin winds on the fruit orchards which causes the droping of flowers and small fruits from the trees. Usually, farmers prepare for the summer agriculture before or after El hessoom squall to avoid its serious effects on seediness.

Needless to say that the previous studies in this field are based upon witnesses and observations which can in general form the data for any statistical approach. Before starting this work, it was found useful to communicate with the parties interested in this study to collect the data and information of the impact of cold squalls on their different fields. There are examples of the severe effect of squalls on Marine activities, Agriculture crops, Plant Epidemic outbreak , Flash Floods , Protected cultivation and the Chilling requirement of Deciduous fruit trees, .... etc. Baqui El Karm squall that occurred on 3 February 1992 caused much damages to protected cultivation by tearing the plastic covers of greenhouses and tunnels. Some small fish vessels were smashed by heavy sea and many sailors were killed as a result. The weather conditions during the squalls may cause plant epidemic outbreak like potato-Late Blight caused by the fungus Phytophthora infestation. The subsequent sporogensis are all subject to strong climatic controls. For sporogenesis high air humidity is required, and