

**TAXONOMY AND DISTRIBUTION OF THE GENUS DROSOPHILA
IN TAGBILARAN CITY (BOHOL)**

A Thesis

Presented to

**the Faculty of the Graduate School
University of San Carlos**

**In Partial Fulfillment
of the Requirements for the Degree
Master of Science in Biology**

by.

Corazon Oppus Banluta

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This thesis entitled TAXONOMY AND DISTRIBUTION OF THE GENUS DROSOPHILA IN TAGBILARAN CITY (BOHOL), prepared and submitted by Miss Corazon Oppus Banluta in partial fulfillment of the requirements for the degree of MASTER OF SCIENCE IN BIOLOGY has been examined and is recommended for acceptance and approval for ORAL EXAMINATION.

Thesis Committee

Fr. E. Schoenig
ENRIQUE SCHOENIG, SVD, Ph.D.
Adviser

Araceli & Almase
ARACELI G. ALMASE, Ph.D.
Censor

Plateros
CRISTOBAL G. PLATEROS, M.S.
Censor

Ricardo T. Deang
RICARDO T. DEANG, M.S.
Censor

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Approved by the Committee on Oral Examination with a grade of Passed.

L. Varela
LOURDES Y. VARELA, Ph.D.
Chairman

Fr. E. Schoenig
ENRIQUE SCHOENIG, SVD, Ph.D.
Adviser

Plateros
CRISTOBAL G. PLATEROS, M.S.
Member

Araceli & Almase
ARACELI G. ALMASE, Ph.D.
Member

Ricardo T. Deang
RICARDO T. DEANG, M.S.
Member

Carolina P. Tular
Representative
Bureau of Private Schools

Accepted and approved in partial fulfillment of the requirements for the Degree of MASTER OF SCIENCE IN BIOLOGY.

Comprehensive Examination Passed: August 10, 11, and 13, 1973.

L. Varela
LOURDES Y. VARELA, Ph.D.
Dean, Graduate School

Date: March 17, 1975

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CORAZON OPPUS BANLUTA

Cebu City, Philippines

ABSTRACT

The genus Drosophila of the family Drosophilidae was established by Fallen in 1823. This genus is one of the largest genera of insects. Members of this genus maybe appropriately be referred to as "pomace" or "vinegar flies" since they abound in places where products of fermentation are present.

A survey of the genus Drosophila in Tagbilaran City was conducted from October 1, 1973 to December 31, 1973. Collections were made in eleven selected areas each having four collection sites namely: garbage deposits, flowering plants, under trees and artificial baits consisting of fermented bananas.

Eleven species representing three subgenera were identified. The three subgenera represented and their respective species are as follows:

Subgenus SOPHOPHORA Sturtevant

Drosophila ananassae Doleschall

Drosophila melanogaster Meigen

Drosophila kikkawai Burla

Drosophila pectinefera Wheeler and Takada

Drosophila takahashii Sturtevant

Subgenus DROSOPHILA Sturtevant

Drosophila hypocausta Osten Sacken

Drosophila immigrans Sturtevant

Drosophila hydei Sturtevant

Subgenus SCAPTODROSOPHILA Duda

Drosophila bryani Malloch

Drosophila setifera Wheeler and Takada

Drosophila eluta Wheeler and Takada

Of the eleven species identified D. hydei, D. melanogaster, D. ananassae and D. immigrans are the most common species. Among the four collection sites garbage deposits yielded the highest number of Drosophila individuals followed by artificial baits, under trees and the flowering plants yielded the least number of Drosophila individuals.

Since there is no extreme variations in humidity, temperature and altitude all the eleven species were found to exist in all the areas where collections were made.

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INTRODUCTION

The Diptera constitute one of the largest orders of insect. Most of the members of the group can be readily distinguished from other insect to which the term "fly" is applied (e.g. sawflies, stoneflies, mayflies, etc.) by the fact that they possess only one pair of wings, the forewings. The hindwings are reduced to small knob-like structures called halteres, which function as balancing organs. The majority of the Diptera are relatively small soft bodied insects. Some are distinctly minute and can hardly be seen by the naked eye.

The family Drosophilidae of the order Diptera is well-represented in the Pacific region since the usual larval food sources such as garbage, rotting fruits and mushrooms are present. The family is widespread in Micronesia and absent only in the northern drier atolls of the Marshall Islands. Wheeler and Takada (1964) have identified 69 species of Drosophilidae representing 17 genera from Micronesia. Of the 69 species treated 33 are described as new. The rather surprising number of new species is largely explained by the fact that no major studies of the family in Micronesia have been done previous to their