



4-H Study Materials for Entomology Contests

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I. Introduction

Why Study Insects?

Insects are extremely diverse and make up more than half of the species on earth. Insects are important as decomposers, pollinators, predators, and pests. They also are fascinating organisms with a wide range of behavior and life styles. Many insects also are admired for their beauty.

Understanding insects and recognizing key species is important because insects significantly affect crop production, livestock, human health, buildings, and our food. Insects are important in food webs and are critical organisms in the recycling of materials in the environment. Studying insects is well justified with all of the significant things that insects impact.

Studying insects is a challenge because there are many kinds with unique characteristics. Moreover, the vocabulary used in entomology is specific to insect study. Nevertheless learning about insects can be fun and provide great understanding about the world in which we live. One way to learn is to participate in contests.

Entomology contests introduce youth to the fundamentals of entomology and develop skills in identification of common insects and their relatives. This document provides some basic information and an outline of materials that can be used to prepare for the contests. The basic entomological principles to be covered include: insect structure and function, metamorphosis, insect identification and importance of insects to humans.

4-H Contests

4-H entomology contests consist of two parts: (1) a written examination; and (2) insect identification. Each part is worth 50 percent of the total score. The written examination consists of true and false, multiple choice, matching or completion questions prepared mainly from the study material in this document. Actual insect specimens, many of which will be selected from the enclosed list, are used in the identification portion of the contest. This document provides suggested material to prepare for the contests, but note that this study material is not the sole source of information used in the contests.

See the latest 4-H guides to determine requirements for eligibility and team structure for 4-H contests. District contests consist of three age divisions: junior, intermediate and senior. The contests are prepared for those age groups. Material suggested for junior, intermediate and senior contestants are reflected in this document. District contests and state contests are similar but the state contest is typically more challenging. Tie-breaker questions are included with the contest. If there is still a tie, identification to order is used, then identification to common name and then spelling.

4-H members should collect and study as many insects as possible in preparation for these contests. Preparing

a collection will help contestants learn identifying characteristics, biology, hosts, behavior, etc. Photographs and slides should also prove useful in studying identification of the insects. A set of nine video tapes which is based on a previous edition of this document is available for team training. Contact Agricultural Communications (979-845-2704), Texas Cooperative Extension, Texas A&M University System for information.

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