I. INTRODUCTION

In this paper, my aim is to sketch an account (in some places, no doubt, somewhat controversial) of Aristotle’s views on the discovery of essential definitions in the *Analytics*. Then I will examine how far, and how successfully, he attempted to approach issues concerning substances and biological kinds using the same or a similar, framework. I will suggest that he did attempt an approach of this general kind in the case of substances (such as men, sheep *etc*) in parts of the *Metaphysics*, but that his biological investigations did not provide the material to allow him to carry through this programme successfully without substantial modification. Finally, I will argue that the problems he encountered in his biological works stemmed from the nature of the subject-matter (as he investigated it), and could not be easily resolved within his conceptual framework.

II. THE ANALYTICS MODEL (INTRODUCTION)

The opening lines of *Post. An. B.10* suggest an account of scientific enquiry which involves three stages:

Stage I: this stage is achieved when one knows an account of what a name or name-like expression signifies;

Stage II: this stage is achieved when one knows that what is signified by the name or name-like expression exists;

Stage III: this stage is achieved when one knows the essence of the object or kind signified by the
name or name-like expression.

Thus Aristotle writes:

"Since a definition is said to be an account given in reply to the "What is ___?" question, it is clear that one sort will be an account given in reply to the question "What is it that a name or name-like expression signifies?" An example of such a question is "What is it that 'triangle' signifies?" When we grasp that what (it is that) is signified exists, we seek the answer to the "Why?" question. It is difficult to understand in this way (viz through gaining an answer to the "Why?" question) things which we do not know to exist" (93b29-33).

If Aristotle does adopt a three-stage account of scientific inquiry, several questions become pressing.

(a) What information is needed at stage (I) as a necessary preliminary to a discovery of the existence and essence of the kind involved?

(b) What information is required at stage (II) in order to possess sufficient information to know that the object or kind exists?

(c) What is the connection between the type of information acquired at stages (I) and (II) and the complete definition of (eg) thunder discovered at the conclusion of scientific investigation into its essence? (i.e. between pre- and post- explanatory accounts of 'thunder').

These questions raise, in an acute form, several even more fundamental issues. How is it, in Aristotle's theory, that one obtains at stage (I) information which is—on occasion—about kinds, even when one does not know that these kinds exist or even that they are genuine kinds (with their own essences)? How is it that what is discovered to exist at stage (II)—on the basis of this information—can be, on occasion, kinds with given essences? That is, how is it that stages (I) and (II) are connected, at least in some cases successfully, with the final stage of enquiry?

In this paper, my focus is on part of question (c). How are essences discovered in the Analytics account?