An Introduction to HEREDITY AND GENETICS Modern Biological Laws and Theories Relating to Animal and Plant Breeding

INTRODUCTION

Ever since the dawn of civilization attention has been given to the breeding of plants and animals. as evidence the numerous strains of cultivated plants and do mesticated animals that now exist and have been in existence for many thousands of years. There seems to be no doubt that all of these domesticated forms have originated from wild forms. The origin of some of the forms is actually known, but that of the majority is lost in the centuries preceding the time of written records.

In most cases considerable differences now exist between the wild and the domesticated forms. The superiority of the latter over the former has been brought about by crossing and by intelligent selection of the most desirable forms, according to the purpose man had in mind.

Man's knowledge of the laws governing the production of animals and plants has been gradually acquired, slowly for a long time, but more rapidly as his acquaintance with the organic world increased. Especially have great strides been made during the last fifty years—since the appearance of Darwin's Origin of Species (1859), when, with overwhelming evidence, it was shown that organic beings are the "modified descendants of carlier terms, that in some way (by Natural Selection) new for as have arisen from the old ones, and have given rise, in term, to other forms."

In the chapters that follow an extempt is made to outline briefly the more important the ries that have been put forward by biologists to explaplant and animal life, and to sum gained by experimental investigation the information tance. These will be discussed with the object of showing their bearing on the important problems of breeding. These chapters form, therefore, an introduction to the more technical courses given in the department of Animal Hus-