bandry including Poultry Husbandry, Cereal Husbandry or Agronomy, and Horticulture where direct applications are made to the better breeding of animals and plants.

Heredity has been defined as "the organic or genetic relation between successive generations," and again as "the germinal resemblance among organisms related by descent." Genetics is "the science which deals with the coming into being of organisms" by breeding carried on from generation to generation. Essentially Genetics has to do with the study of heredity, and its main object is to determine not only the mode of action of the germinal factors concerned in bringing about the relation implied in heredity, but also that of the external agencies that may affect the development of the new individual.

Genetics is breeding under rigid control so that we may know what is happening. At the present time the control is such that it is not possible to know all that is happening, but as Genetics is one of the you.gest sciences, dating as it does from 1900 when Mendel's discoveries were made known, we may confidently look forward to a time when a method of continuous control may be employed in all breeding experiments.

We can probably all agree with Bateson when he says: "An exact determination of the laws of heredity will probably work more change in man's outlook on the world and in his power over nature than any other advance in natural knowledge that can be clearly foreseen."

## Chapter 1—THE WORLD OF LIVING THINGS

It is very probable that ever since man's appearance on the earth the living things about him were more or less closely observed and their most evident likenesses and differences noted. In other words, our early ancestors made rough groupings of the animals and plants with which they came into contact. One of the first observers to record his observations was Aristotle (469-399 B C.). His groupings were crude according to present-day standards as they were based mainly on external similarities of structure, but they remained practically unaltered for over 2,000 years, until the time of Ray (1628-1705) and Linnæus (1707-1778). Ray defined the term species but it was reserved for Linnæus to establish the binomial system of nomenclature and the grades of classification, viz., Class, Order, Genus, Species and Variety in his great work "Systema Naturæ."

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