

LITERATURE LIST

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GLOSSARY

Acquired Character. A feature developed during the life of the individual possessing it, in response to the action of use or environment.

Albino. An animal without pigment in the skin, hair or eyes. The hair is white; the eyes pink owing to the colour of the blood. Among plants, white-flowered varieties are called albinos. The condition is called *albinism*.

Allelomorph. One of a pair of alternative Mendelian characters. When a pair of characters are alternative in their inheritance, and segregate from each other in the formation of the germ-cells of an individual which contains both, they are said to be *allelomorphic* with each other. See *Segregation*.

Anther. The part of the stamen in a flower which contains the pollen.

Chromogen. A colourless substance which when oxidised gives rise to a coloured body (pigment).

Chromosome. A body in the nucleus of a cell, which absorbs stains and becomes clearly visible during nuclear division, but becomes dispersed through the nucleus during the resting phase. During nuclear division each chromosome becomes accurately halved, so that in general all cells of each species of animal or plant contain an equal number of chromosomes.

Continuous. See *Variation*.

Determinant. The hypothetical unit in a germ-cell which determines the production of a particular character in the individual derived from that germ-cell. See *Factor*.

- Deviation.** The amount by which an individual differs from the mode in continuous variation.
- Dimorphism.** The condition in which a species exists in two distinct types or sharply separable varieties. When the two sexes differ thus, the condition is called *Sexual Dimorphism*.
- Dominant.** When two varieties, differing in one character, are crossed together, and all the offspring have the character borne by one parent, that character is dominant. Applied to one of a pair of Mendelian allelomorphs.
- Egg-cell.** The germ-cell produced by the female.
- Epistatic.** When one character *A* is superposed upon another *B*, so that *A* prevents or obscures the appearance of *B*, although they are not allelomorphic with each other, *A* is said to be *epistatic to B*.
- 'Extracted' Homozygote.** When two heterozygous individuals are mated together, their homozygous offspring are spoken of as 'extracted' homozygotes.
- F_1, F_2 .** The Symbol F_1 is used to indicate the offspring (first filial generation) of a mating between two differing individuals. The later generations (second, third filial, etc.) are represented by F_2, F_3 , etc.
- Factor.** In Mendelian inheritance, the hereditary determinant (q.v.) of a particular character is spoken of as the *factor* for that character.
- Ferment.** A body which has the power of causing chemical action between substances which in its absence are inactive towards one another.
- Fertilisation.** The union of male and female germ-cells which precedes the development of a new individual. It consists essentially in the fusion of the nuclei of the germ-cells.
- Gamete.** A germ-cell, q.v.
- Gemmules.** Hypothetical bodies supposed to be given off by the cells of the body, and entering the germ-cells, to transmit heritable characters to the next generation.

- Germ-cell.** A reproductive cell, which, usually after union with a germ-cell from another individual (fertilisation), develops into a new individual. In animals the germ-cells of the male are *spermatozoa*, those of the female *ova* (*egg-cells*). In plants the male germ-cells are contained in the *pollen*; the female, *egg-cells*, in the ovules or embryo-seeds.
- Germ-plasm.** The germinal substance, which according to Weismann is alone able to give origin to new individuals.
- Heterozygote.** An individual containing both members of an allelomorph pair of characters, i.e. which is hybrid in respect of that pair of characters, and produces germ-cells bearing one and the other respectively. Adjective—*heterozygous*.
- Homozygote.** An individual made by union of two germ-cells each of which bears the same member of an allelomorph pair of characters, so that it is 'pure' in respect of that character, and all its germ-cells bear the same character. Adjective—*homozygous*.
- Mode.** The most frequent condition of a character which varies continuously. Its measurement is called the *modal value*.
- Mutation.** A variety which is not connected with the type by intermediates. More strictly, the sudden origin of such a variety.
- Nucleus.** A sharply defined body found in every cell, which seems to control the activities of the cell.
- Ovum.** The germ-cell produced by the female, an egg-cell.
- Pin-eye.** In *Primula* (Primrose, Cowslip, etc.), the form in which the style is long and the anthers low down in the flower-tube. The other form, with short style and anthers high up, is called *Thrum-eye*.
- Pollen.** The powder bearing the male germ-cells in a flowering plant.
- Polymorphism.** The condition in which a species exists in several distinct forms or varieties.
- Recessive.** When two individuals are crossed, bearing different

members of an allelomorphic pair of characters, the member of the pair which does not appear in the offspring is called *recessive*.

Reversion. A 'throw-back' to a previous ancestor, or to the type of the species, when varieties are crossed.

Segregation. In Mendelian inheritance, the separation of the two characters of an allelomorphic pair, in a heterozygote, into distinct germ-cells, i.e. the formation of gametes each bearing one character of a pair, by an individual which contains both members.

Self-fertilisation. The fertilisation of a female gamete by a male gamete produced from the same individual. The process in plants is spoken of shortly as *selfing*.

Somatic. Having reference to the body ('*soma*') considered as distinct from the germ-cells. A character borne or exhibited by the body but not represented in the germ-cells is called *somatic* as contrasted with *germinal*.

Spermatozoon. See *Germ-Cell*.

Style. The part of a flower which receives the pollen, and conducts the male germ-cell to the egg-cell.

Telegony. The supposed influence of a former sire upon young born to a later sire by the same mother.

Type. The normal form of a species, which is regarded as *typical*.

Variation, Variability. The differing among themselves of individuals of the same species. When the extreme forms are connected by a complete series of intermediates, the variation is *Continuous*; when distinct forms occur, not connected by intermediates, it is *Discontinuous*.

Zygote. An individual produced by the union of two gametes.

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