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THE

LAWS OF HYBRIDIZING

DISCOVERED BY
RICHARD DIENER
KENTFIELD
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IN PUBLISHING THIS DISCOVERY I WISH TO DEDICATE IT TO HON. WILLIAM KENT OF CALIFORNIA, WHO BACKED AND AIDED THE WORK IN THE PUBLIC INTEREST

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With the author's kind regards. 

Richard Diener

Gift
WHAT PLANT LIFE IS

PLANT life is a chemical process by which the sun’s rays are caught through the chlorophyll of the leaves and deposited on the earth’s surface as carbon. Since the beginning, untold numbers of plant life have been created continually by the sun’s rays in water or moist places where conditions are favorable. But of those untold numbers only such as had the ability to sport could climb the ladder of evolution.

In their early stages it was their habit of life to float in moisture, and propagation was accomplished by splitting apart. This was the sexless state.

In later stages, growing in the marshes, they commenced to develop root systems, and finally developed varieties growing outside the marshes; sex developed, and eventually reached the stage of seed production. After they had reached the stage where they reproduced themselves from seed they developed all kinds of forms which were necessary in dryer conditions.

They then developed faster—from grasses to shrubs, from shrubs to bushes and from bushes to trees.

Under whatever condition they were living at this time their object was to catch the sun’s rays, make carbon out of them and deposit them as solid matter on the earth’s surface.

Take for instance our California redwoods, which are Nature’s highest development on earth to-day. Billions of years since a thousand ancestors of these very redwoods could be held in a drop of water. Some trees, like the California live oak, or many varieties growing in the tropics, show the wonderful result of Nature’s intention in a very striking way. If the leaves of a single tree of this description were laid side by side they would cover the greater part of an acre, yet the tree occupied only a small part of the earth’s surface. In order to build themselves up in their evolution the roots had to take material from our earth, as lime, to strengthen their structure, and many other chemicals
necessary for the same purpose, just in the same fashion as the animals do to build up their skeletons.

Now the carbon will remain on the earth's surface till some day fire is set to it, which is still another chemical process, and release all that came from the sun in gas. The gas will disappear from the earth but all material which was used from the earth for building up the structure of plants will remain as ashes.

When we look over the earth and see only a few thousand plant and animal families, it means that from the untold numbers of embryonic life that the sun created through the billions of years only those upon which Nature bestowed the ability to sport have survived.

**SPORTS**

A sport is an individual outgrowth of a variety; in most cases with characteristics so markedly different from the original as to attract attention. It is the nucleus of a new cycle in the variety and may appear as bud, branch or seed, without cross pollination.

Prior to the acquisition of sex, when the propagation of plant life depended entirely upon the splitting-apart process, any variety which did not produce a sport during its cycle of existence was doomed to extinction.

These cycles differ in length from a short period in fast-growing ones to a term of a thousands of years in the slow-growing.

As an example of the first we have the Sagina Supulata which spreads like a carpet on the ground in its moss-like growth. The original color of the plant is dark green, while the sports, which can be discerned easily, appear in light green, yellow and brown.

In the germ form of animal and plant life where the growth is so rapid that a cycle of life comprises but a half hour we see the most rapid sporting, as in diseases like colds, flu, cholera and typhoid. The cycle of a variety here is composed of a term of from a few months to a few years, so that when they reappear after a certain period they will show different habits and characteristics from their progenitors which the new sport has taken on.
ANIMAL LIFE IN RELATION TO PLANT LIFE

Originally plants and animals came from the same source, but in later developments of early germ stages some species acquired the habit of plant eating, and thereby losing their chlorophyll. Animal life became Nature's maw which, whether carried by an elephant or the smallest microbe, performs the function of transforming plant matter into plant food upon which the new plant forms thrive.

If it were not for the existence of animal life the leaves, bark and general residue of vegetation would, in a period of twenty-five years or thereabouts, cover the ground to such a height that no new vegetation could spring up and plant life would annihilate itself, there being no decay.

CROSS-BREEDING—WHAT IT IS AND MEANS

Cross-breeding can only be accomplished within family lines. Take for instance the lines of Solanum and Pirus, which are widely distributed over the earth, and have acquired, through many sportings, re-sporting and varied climatic conditions, very many varied forms.

One cannot cross a Solanum with a Pirus, or vice versa, but must conduct the crossing between the two members of a single family, a Solanum with a Solanum, a Pirus with a Pirus, in order to develop new hybrids. The rule would hold the same with the Gladiolus or Erica families.

Ever since boyhood I have been interested in plant life in general and anxious to delve into the secrets of plant growth. Cross-breeding at that time was just being seriously entered upon, and consequently I adopted it as my hobby. When seventeen years of age, happening to cross some tuberous Begonias, I found, when the seedlings flowered, that a great many had doubled the size of the parent flower. This set me to thinking that there might be natural laws existing of which we have no
knowledge. From this time onward I worked systematically with crosses, making an endless number, and carefully preserving records of the sizes of plants and flowers used. As the seedlings bloomed they demonstrated more and more clearly that I was on the right path, and certain of the crosses gave me an inkling of the method used for increasing size, though it took thousands of crosses and about fifteen years of time to perfect the actual laws I herewith submit; these laws accomplish by short, direct method what it would take Nature thousands and hundreds of thousands of years to do in a natural way.

EXPLANATION OF DIAGRAM

Sizes A and B in Figures 1, 2 and 3, are intended to represent the comparative sizes of sex parents of flowers, fruit or grain concerned in fertilization. Size C represents the size of the resulting offspring. Each figure represents but one fertilization; by using new parents derived from the offspring C the process can be continued indefinitely.

The first or declining way: reduction of size.

Size A Figure 1 shows a small pollen parent, one-half the size of the ovule parent B. Under such a condition the resulting offspring C will be one-half the size of the pollen-bearing parent A.

It is to be noted that in case the pollen-bearing parent A were smaller than the ovule parent B, but more than one-half its size, the offspring C would be proportionately larger; on the other hand, if A is less than one-half the size of B, then C will be proportionately smaller than shown in the diagram. Consequently, if smaller sizes than the current normal size of a given plant are desired, any amount of reduction can be secured by continuing the process illustrated in Figure 1.

The second or enlarging way: increase of size.

For the purpose of increasing the size the best results will be obtained by using pollen- and ovule-bearing parents of exactly the same size, as shown in A and B of Figure 2. If the sizes are the same an actual doubling of size will be secured in the offspring C.
KEY to the LAW
Discovered by

A. DECLINING WAY

Size A
POLLEN PARENT (MALE)

×

Size B
OVULE PARENT (FEMALE)

B. ENLARGING WAY

Size A
POLLEN PARENT (MALE)

×

Size B
OVULE PARENT (FEMALE)

Size A
POLLEN PARENT (MALE)

×

Size B
OVULE PARENT (FEMALE)