CHAPTER III

THE SURVIVAL OF THE FIT

THE plants that most perfectly meet their conditions are able to persist. *They perpetuate themselves.* Their offspring are likely to inherit some of the attributes that enabled them successfully to meet the battle of life. *The fit* (those best adapted to their conditions) *tend to survive.*

Adaptation to conditions depends on the fact of variation; that is, if plants were perfectly rigid or invariable (all exactly alike) they could not meet new conditions. Conditions are necessarily new for every organism. *It is impossible to picture a perfectly inflexible and stable succession of plants or animals.*

Breeding. — *Man is able to modify plants and animals.* All our common domestic animals are very unlike their original ancestors. So all our common and long-cultivated plants have varied from their ancestors. Even in some plants that have been in cultivation less than a century the change is marked: compare the common black-cap raspberry with its common wild ancestor, or the cultivated blackberry with the wild form.

FIG. 5. — DESIRABLE AND UNDESIRABLE TYPES OF COTTON PLANTS. Why?

By choosing seeds from a plant that pleases him, the breeder may be able, under given conditions, to produce