

TAIOMORPHIC PLANTS.—We can now see why the ends of the stamens with their anthers, and the ends of the pistils with their stigmas, are a little upturned, so that they may be brushed by the lower hairy surfaces of the insects' bodies. The shortest stamens which lie enclosed within the calyx of the long and mid-styled forms can be touched only by the proboscis and narrow chin of a bee; hence they have their ends more upturned, and they are graduated in length, so as to fall into a narrow file, sure to be raked by the thin, intruding proboscis. The anthers of the longer stamens stand laterally farther apart, and are more nearly on the same level, for they have to brush against the whole breadth of the insect's body. In very many other flowers the pistil, or the stamens, or both, are rectangularly bent to one side of the flower. This bending may be permanent, as with *Lythrum* and many others, or may be effected, as in *Dictamnus fraxinella* and others, by a temporary movement, which occurs in the case of the stamens, when the anthers dehisce, and in the case of the pistil when the stigma is mature; but these two movements do not always take place simultaneously in the same flower. Now I have found no exception to the rule that when the stamens and pistil are bent, they bend to that side of the flower which secretes nectar, even though there be a rudimentary nectar of large size on the opposite side, as in some species of *Corydalis*. When nectar is secreted on all sides, they bend to that side where the structure of the flower allows the easiest access to it, as in *Lythrum*, various *Papilionaceæ*, and others. The rule consequently is, that when the pistils and stamens are curved or bent, the stigma and anthers are thus brought into the pathway leading to the nectary. There are a few cases which seem to be exceptions to this rule, but they are not so in truth; for instance, in the *Gloriosa* lily, the stigma of the grotesque and rectangularly bent pistil is brought, not into any pathway from the outside towards the nectar-secreting recesses of the flower, but into the circular route which insects follow in proceeding from one nectary to the other. In *Scrophularia aquatica* the pistil is bent downwards from the mouth of the corolla, but it thus strikes the pollen-dusted breast of the wasps, which habitually visit these ill-scented flowers. In all these cases we see the supreme dominating power of insects on the structure of flowers, especially of those which have irregular corollas. Flowers which are fertilised by the wind must of course be excepted, but I do not know of a single instance of an irregular flower which is thus fertilised.—From "*The Different Forms of Flowers on Plants of the Same Species*," by Professor Darwin.